3a
Cu

Cupples

curtain walls

1957

cupples
products
corporation

ST. LOUIS, MISSOURI

112 West 34th Street, New York, New York
Architects: Brugnoni, Boehler and Frank

The Medical Towers, Houston, Texas
Architects: Goleman & Rolfe
Cons. Archts.: Skidmore, Owings & Merrill

First Security Bank, Salt Lake City, Utah
Architect: W. G. Knoebel
Associate Architect: Slack W. Winburn

Cupples Products Corporation, one of the largest manufacturers of aluminum windows, doors and ornamental aluminum products, is the leader in the curtain wall field. The photographs and details in this catalog illustrate typical structures which prove Cupples' leadership and versatility in design.

Their Engineering and Development Divisions have formulated several basic curtain wall systems and have produced the strictly custom built job as well. These systems, when used with a variety of windows and various types of panels, result in economical buildings, basically sound and leak-proof.

engineering and detailing services

The curtain wall system used will depend largely on the type of building the architect has under consideration—his design, his budget, and the existing building codes. Cupples Products have trained curtain wall engineers available to the architect for consultation.

window and panel selection

Cupples have produced jobs with varying fenestration—projected, reversible, fixed, top-hung in-swinging, double hung, casements and heavy sliding units. Design and cost affect window selection considerably. This also applies to the type of panel selected, except that the codes may dictate its final choice.

panel types

Commonly, panels, insulated or not, depending upon requirements, are: (1.) Aluminum plate or sheet, reinforced or not; plain finish; gun-metal alumilite gray or bright colored alumilite. (2.) Porcelain enamel on aluminum or steel in many colors, designed with variable "U" factors. (3.) Various types of structural glass—plain or colored. (4.) Stainless steel. (5.) Marble.

One of the deciding factors in the panel selection is often whether or not the interior face is attractive and durable. More buildings, where the code permits, are using the interior panel face as the exposed finish wall.

costs

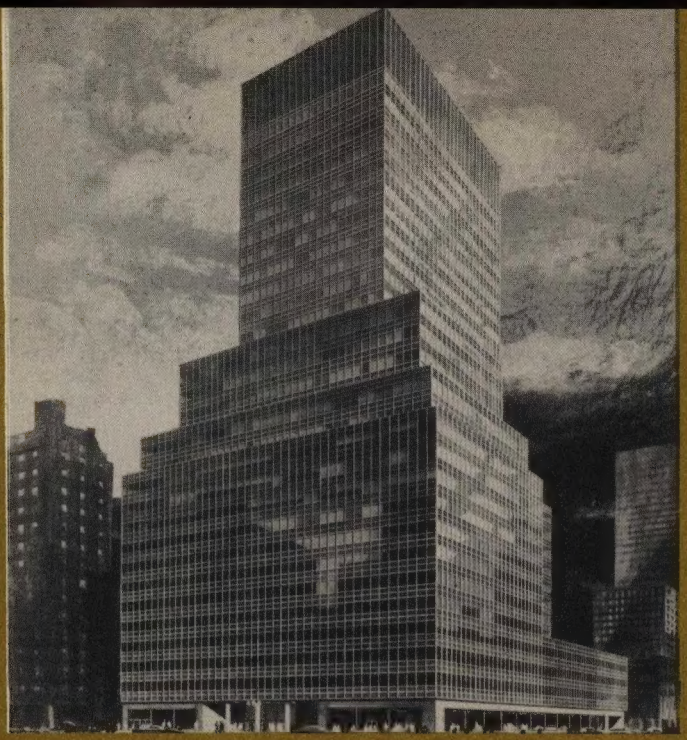
The cost per square foot of any curtain wall will vary, obviously depending upon the location of the job, the size, the codes, local building costs, height of building, etc. There are standard systems with minor variations which, when combined with various types of windows and panels, make it possible to work within an owner's budget. Cupples are ready to furnish any job, no matter how special, if the architect wishes to design that type of building. The fact that so many curtain wall jobs have been erected and are now on the boards proves that they are practical, competitive, and economically sound.

planning

One of the surest ways for a designer to develop an economical and sound system, is to work with an experienced company in the early planning stages. If the curtain wall is designed to the building, substantial savings are made. A complete specification should be developed which would include the furnishing and erecting of the curtain wall and all supporting members by the same company.

what does Cupples offer?

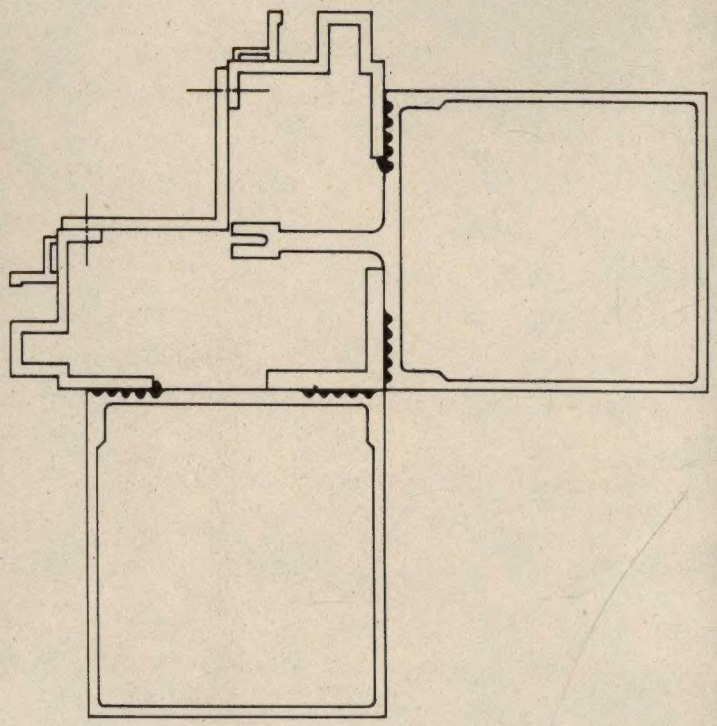
1. Experience in the field.
2. Engineering and detailing aid.
3. Firm budget figures.
4. A large financially stable company who will stand behind their work.
5. Unequaled production facilities.



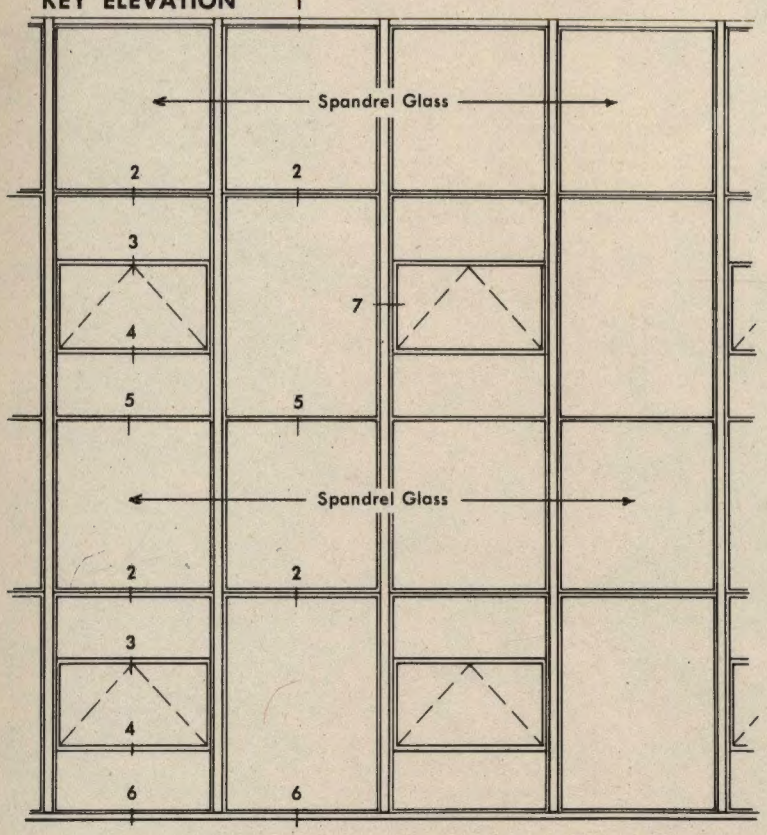
Uris Brothers Office Building
485 Lexington Avenue, New York, N. Y.
Architects: Emery Roth & Sons

Details of an economical vertical system. Projected and fixed windows alternating for inside cleaning. Tubular structural mullions (alumilite finish) with expansion joints occurring at bottom of window and top of spandrel. Note continuous flashing at window head forming a circumferential gutter at each floor. Special heavy extruded sill starter and coping with screen louvers on top floors.

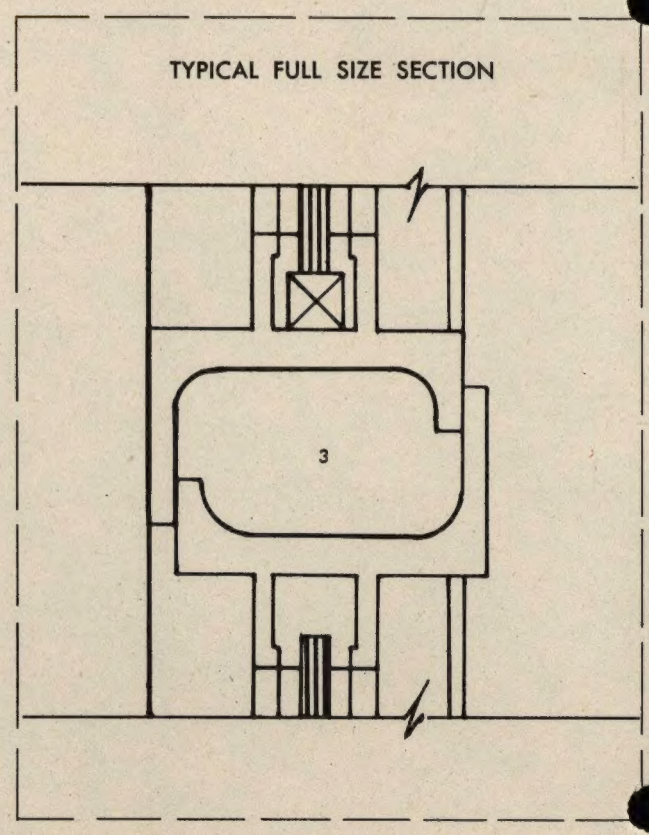
half size details

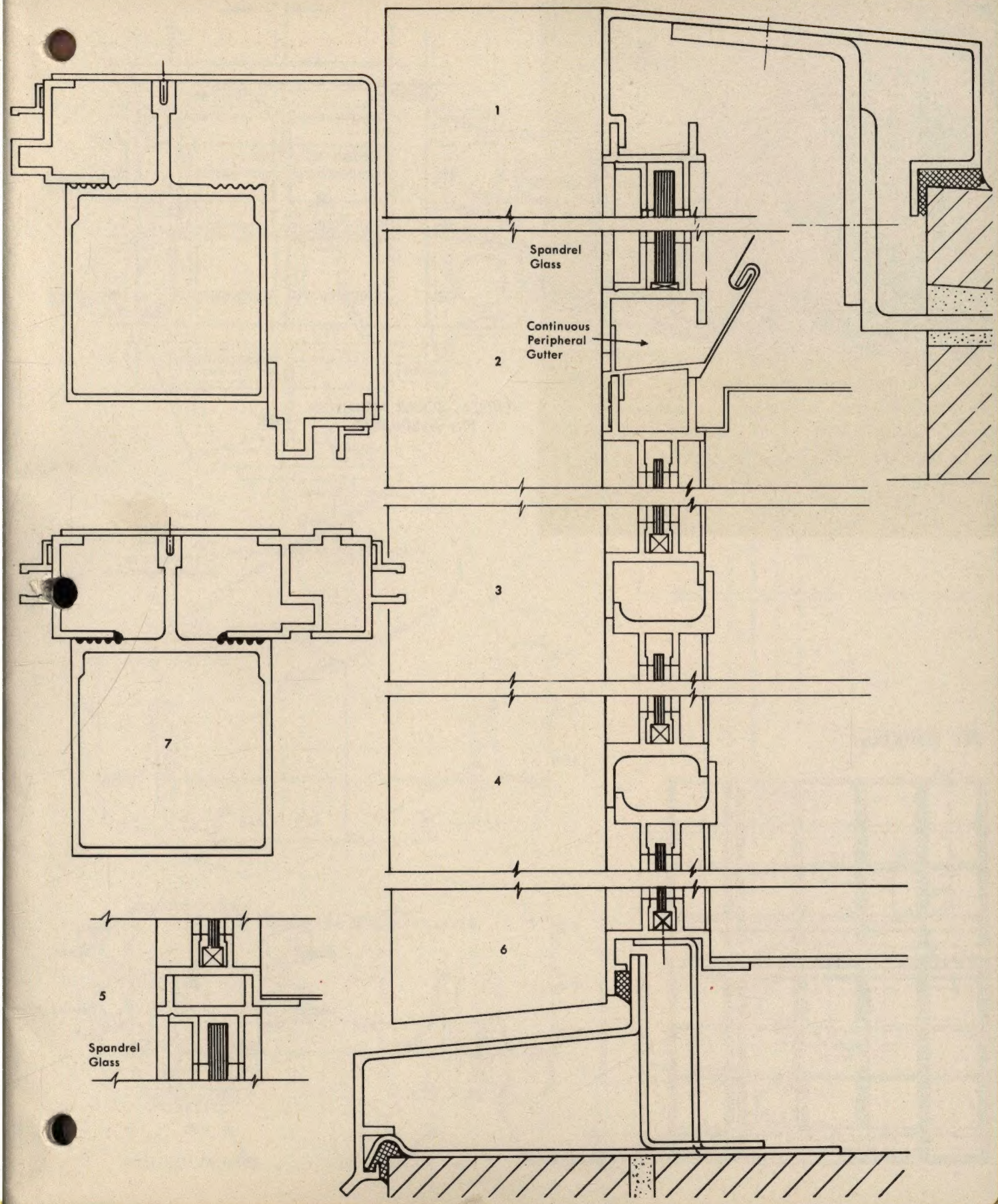


KEY ELEVATION



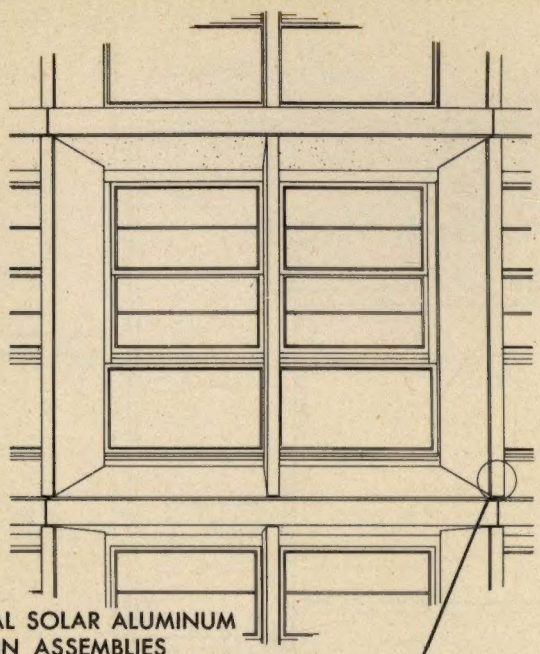
TYPICAL FULL SIZE SECTION



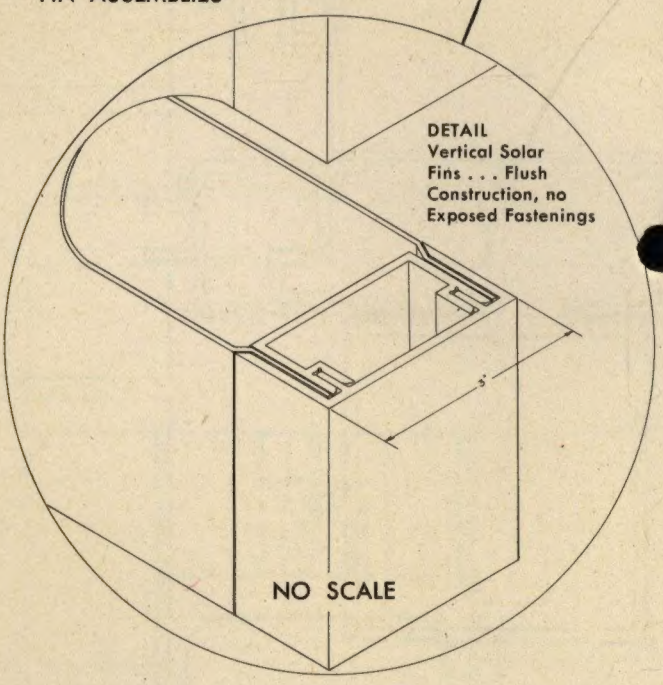

1
Spandrel
Glass
Continuous
Peripheral
Gutter
2
3
4
6
7
5
Spandrel
Glass

City Hall, New Orleans Civic Center for the City of New Orleans
New Orleans, Louisiana
Architects: Goldstein, Parham—La Bouisse—
Favrot, Reed, Mathes & Bergman

Details of a complicated architect designed horizontal system taking full advantage of complex extruded shapes with double and triple hung windows. All shapes designed specifically for this job to develop the architect's design. Vertical, fixed hollow solar shades on one elevation. All material alumilite finish.



VERTICAL SOLAR ALUMINUM FIN ASSEMBLIES



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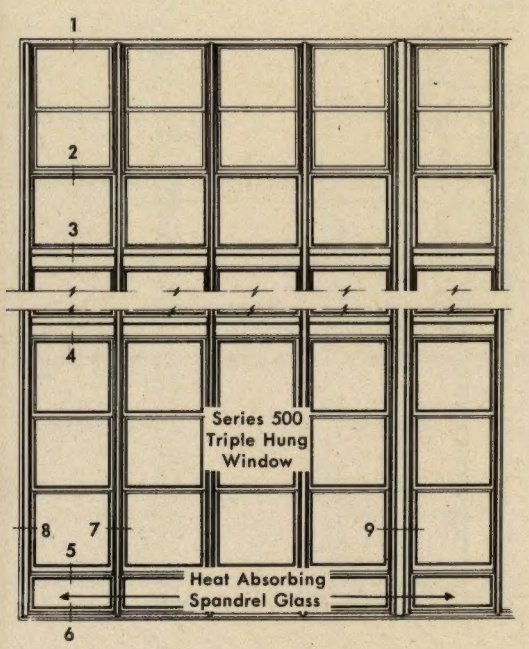
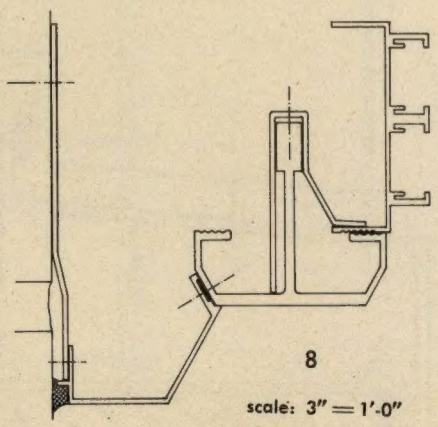
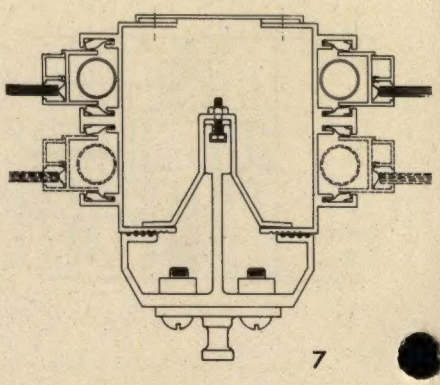


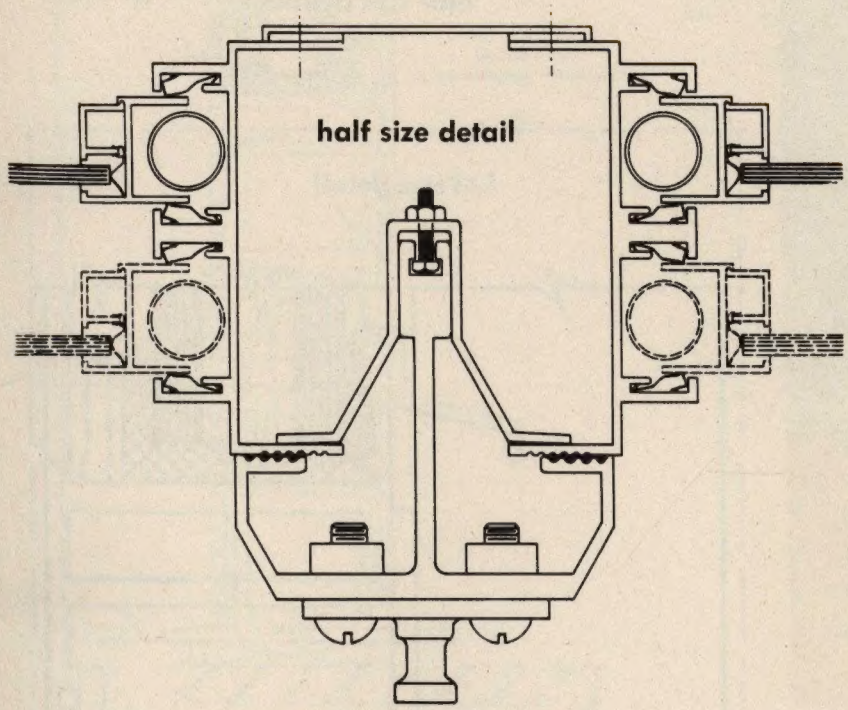


scale: 3" = 1'-0"

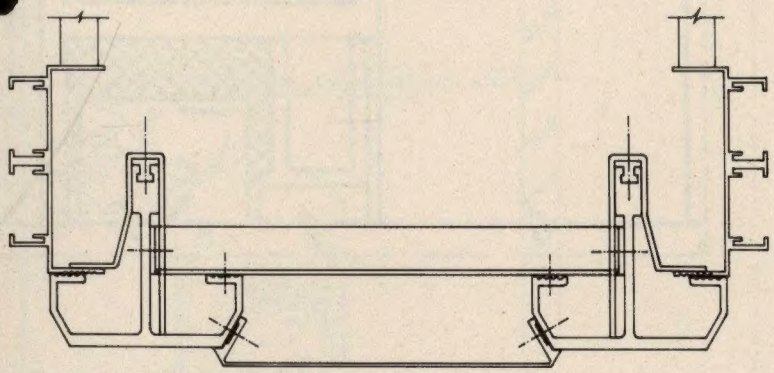


TYPICAL MULLION

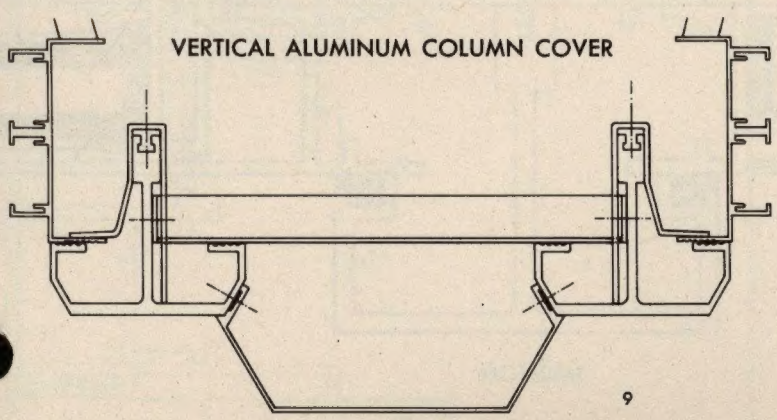
scale: 3"=1'-0"

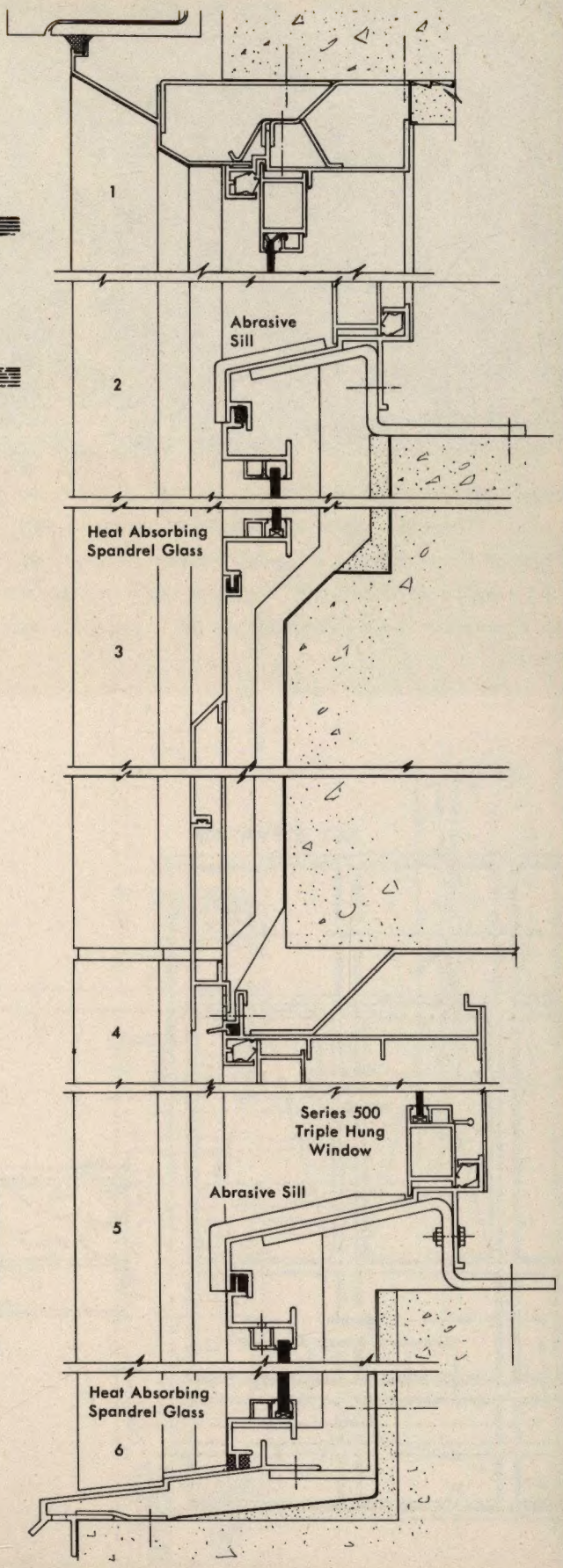


Series 500 Double Hung Windows



VERTICAL ALUMINUM COLUMN COVER



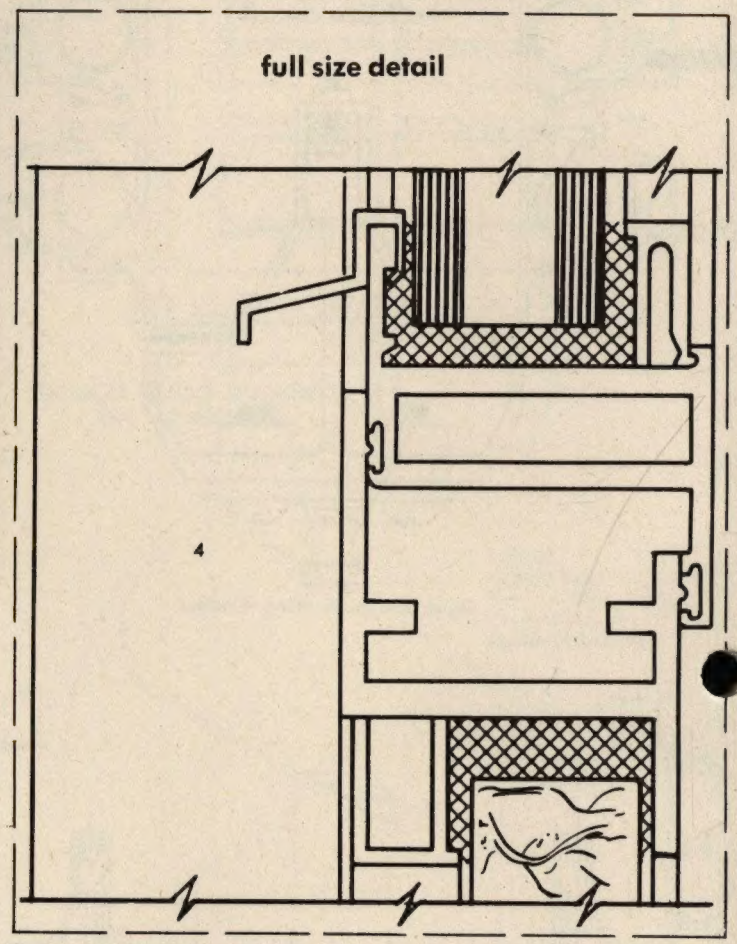


Kansas State Office Building
Topeka, Kansas
Architect: John A. Brown

A monumental type multi-story office building with horizontal system. Windows—top hung, in-swinging for cleaning purposes. Panels—marble (Virginia greenstone)—an interesting method of supporting heavy panels. Horizontal runners punched on under side for air intake. All material alumilite finish.

half size details

full size detail



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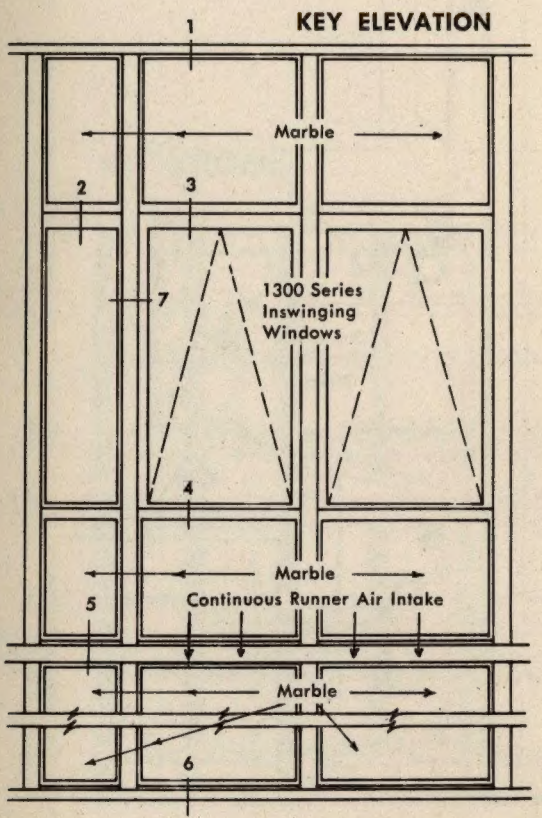
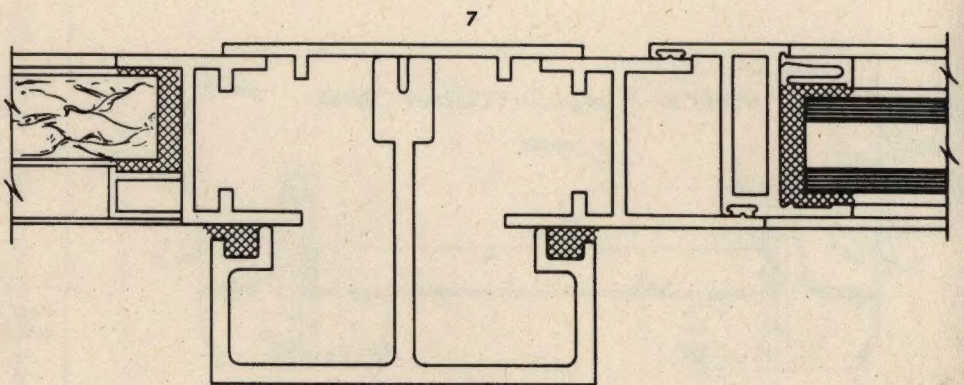
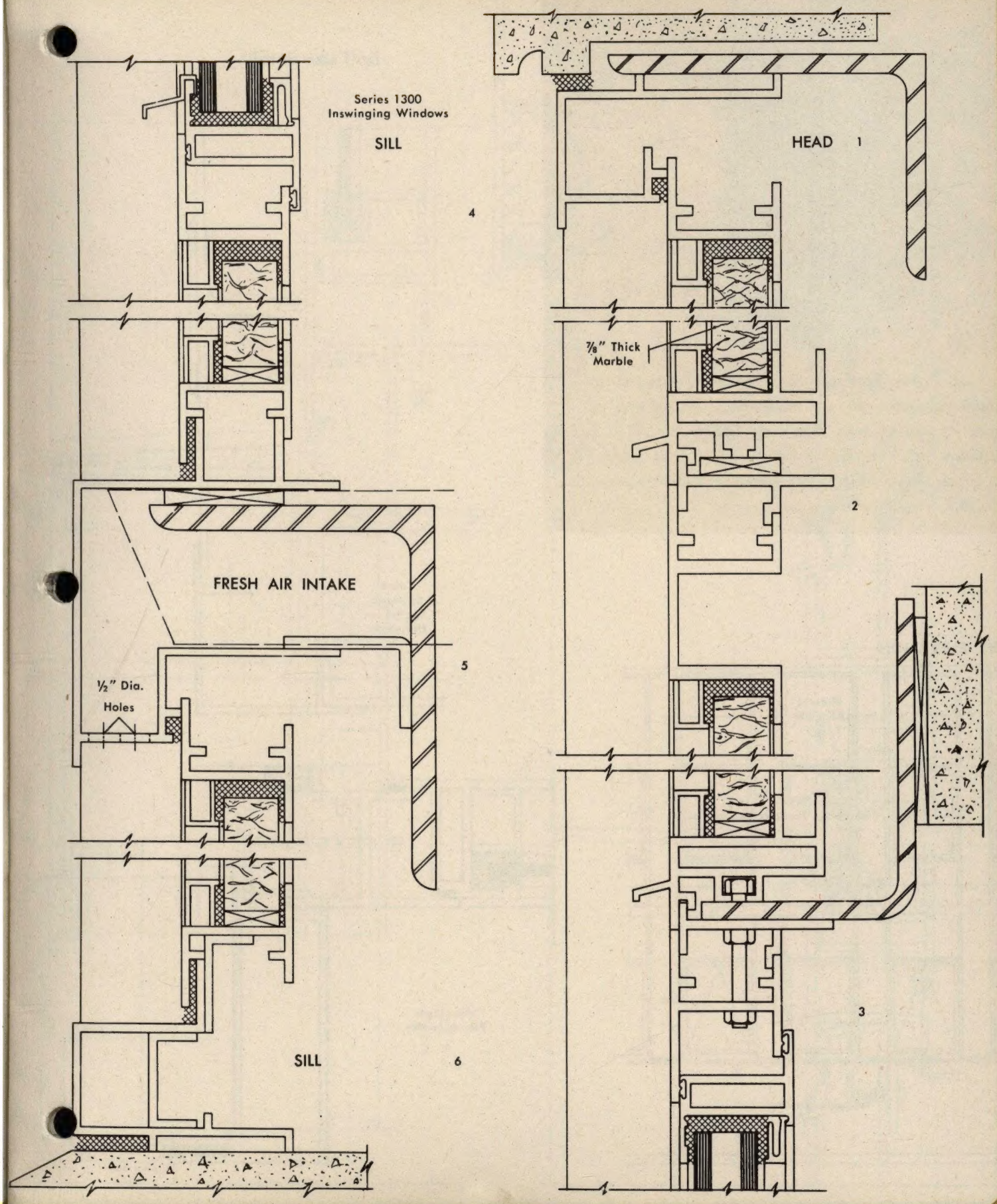
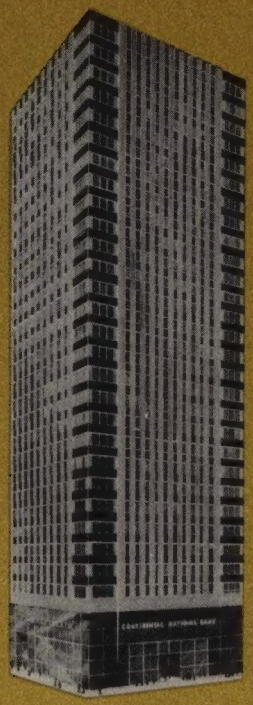




MULLION

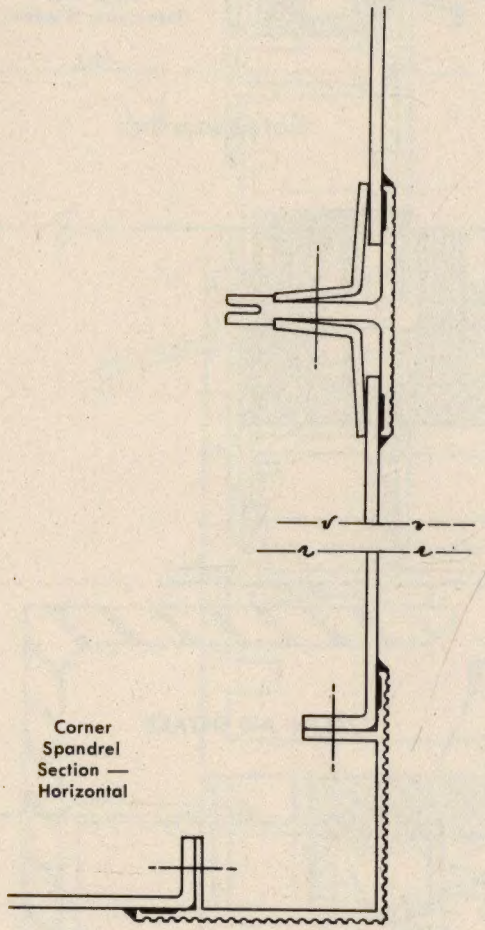

Series 1300
Inswinging Windows
SILL
4
HEAD
1
7/8" Thick
Marble
2
FRESH AIR INTAKE
5
1/2" Dia.
Holes
3
SILL
6



Continental National Bank and Office Building
Forth Worth, Texas
Architect and Engineer: Preston M. Geren

An unusual Curtain Wall application of plain alumilited ribbed pattern panels, blue alumilite panels at corners with top hung in-swinging windows. The usual tubular mullion is replaced by a similar section which forms the jamb at the main panel or pier cover. All joints are sealed by Thiokol to assure owners of a completely waterproof building.

half size details



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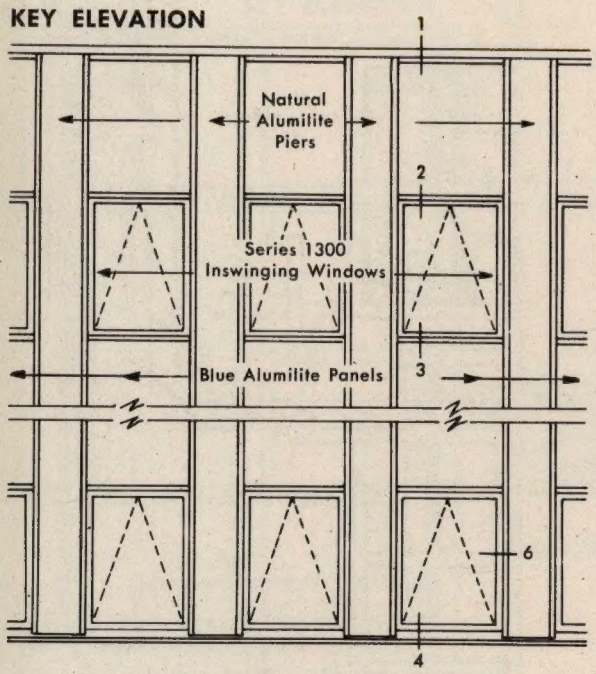
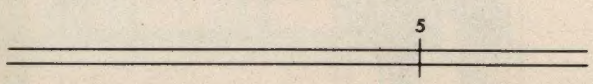
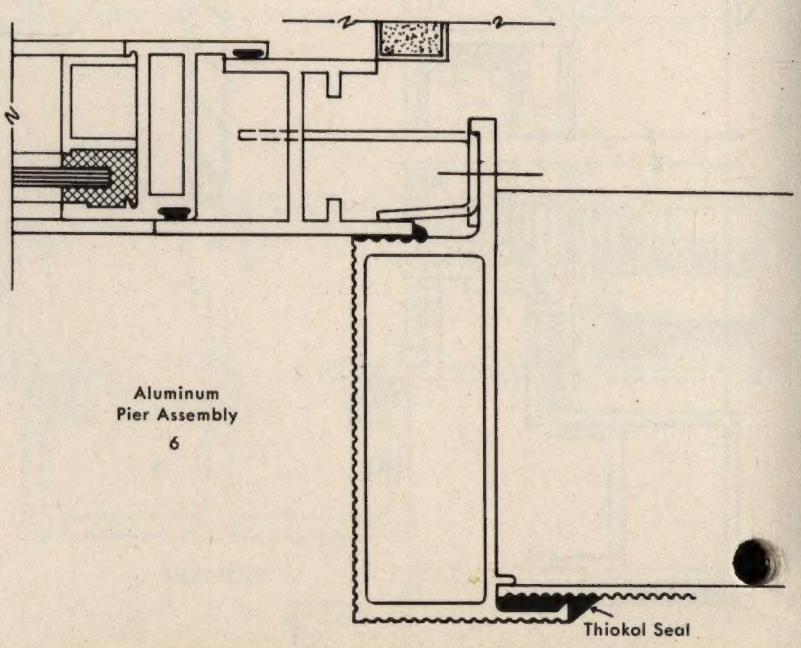
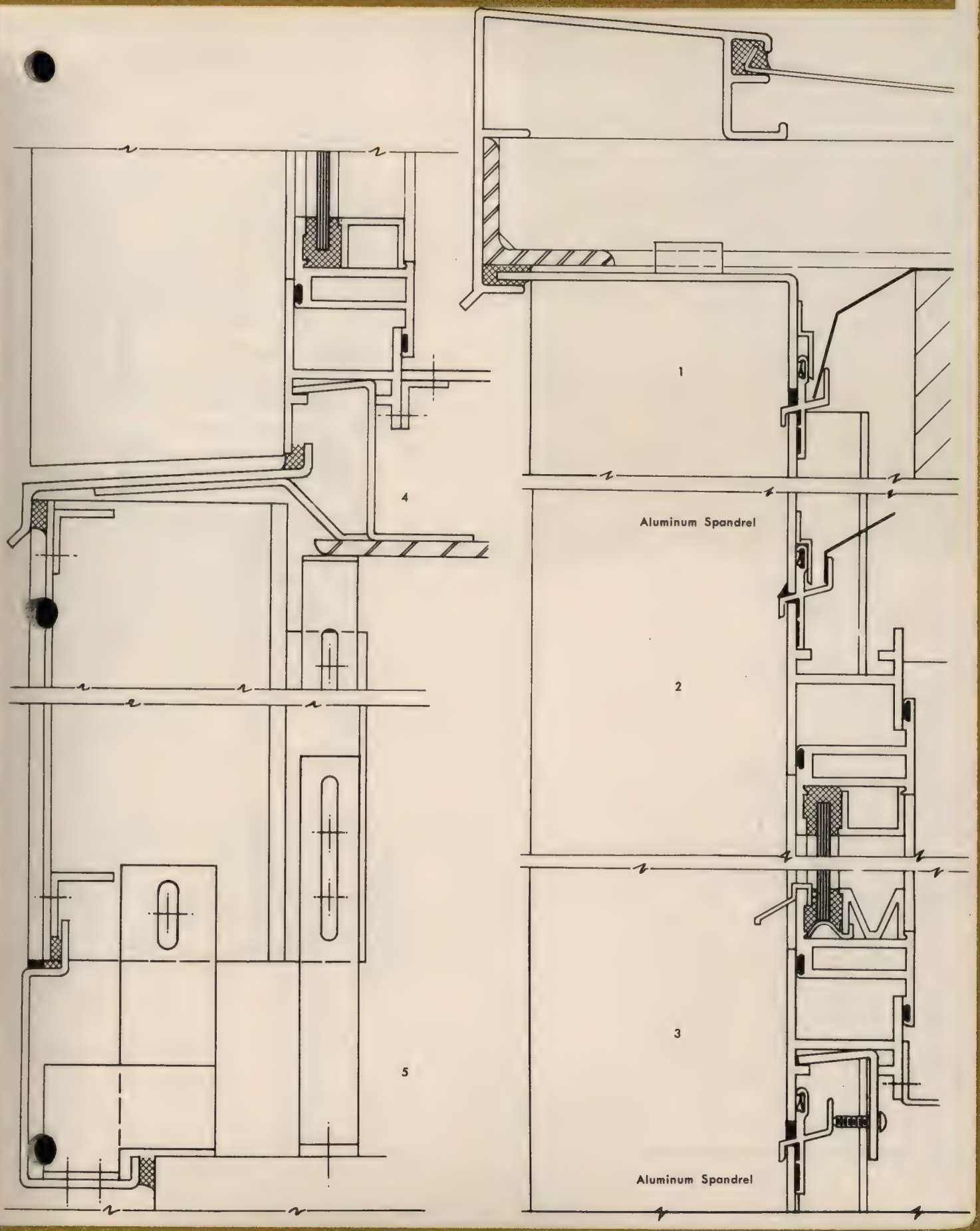


Natural Alumilite



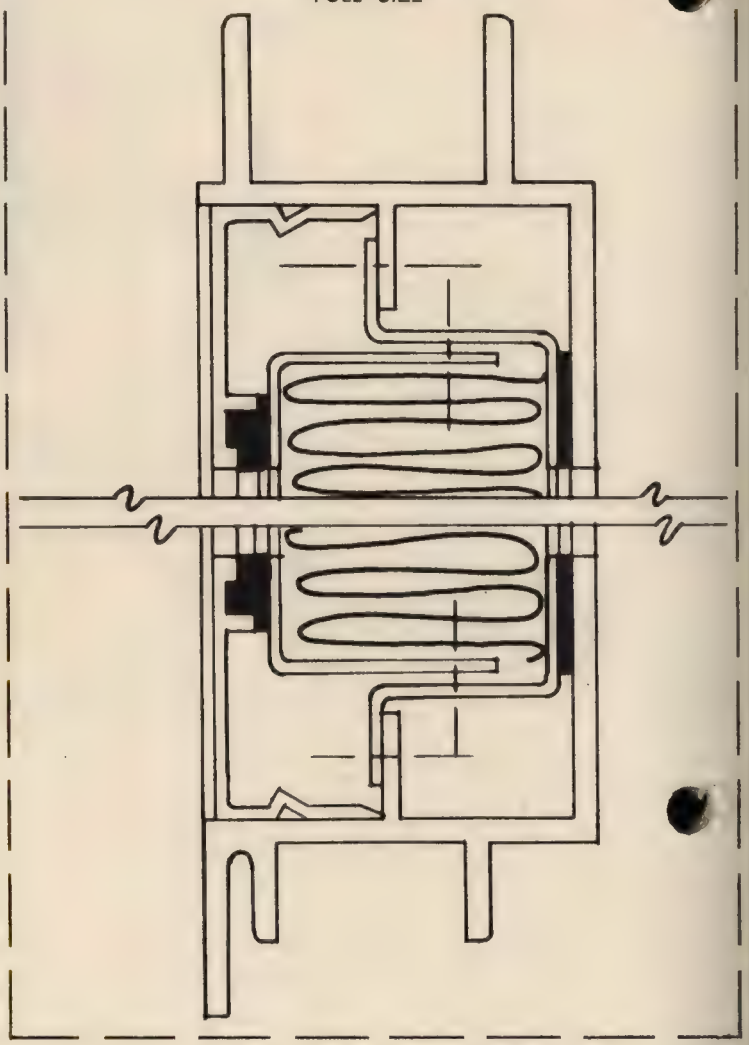



1
Aluminum Spandrel
2
3
Aluminum Spandrel
4
5

Engineering Building, South Dakota State College
Brookings, South Dakota
Architects: Hugill, Blatherwick & Fritzell
Dean W. Loucks, State Engineer, State of So. Dakota

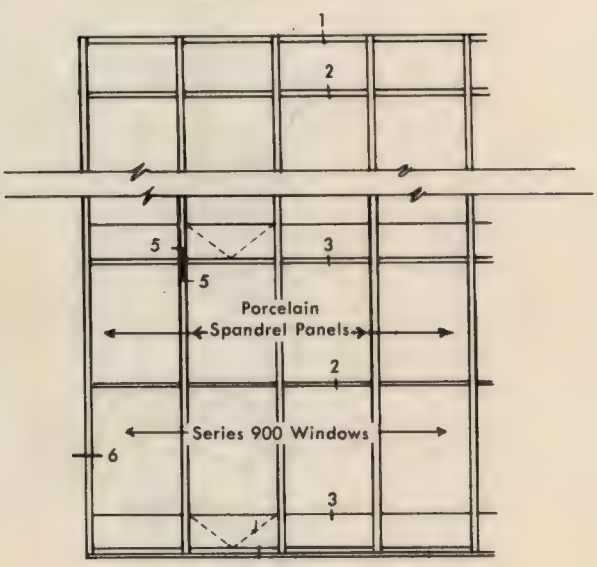
An economical vertical system for a campus project. Tubular projected weatherstripped windows behind tubular extruded mullions, with gray alumilite finish sandwich panels. Standard heavy extruded starting sill members. Alternate detail shown of standard extruded coping, and alternate mechanical panel construction featuring Thiokol glazing.

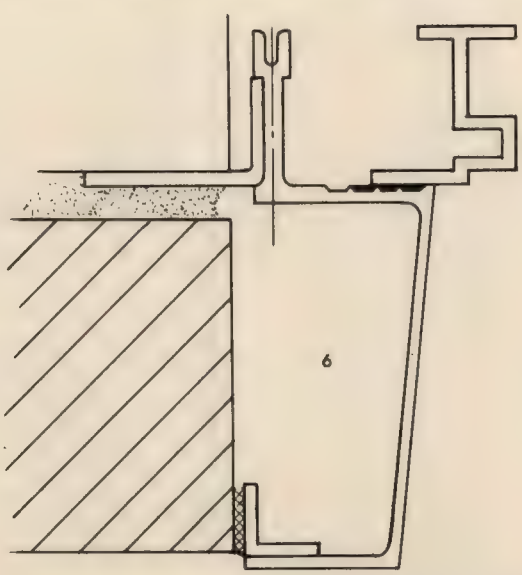
ALTERNATE PANEL FRAME
FULL SIZE



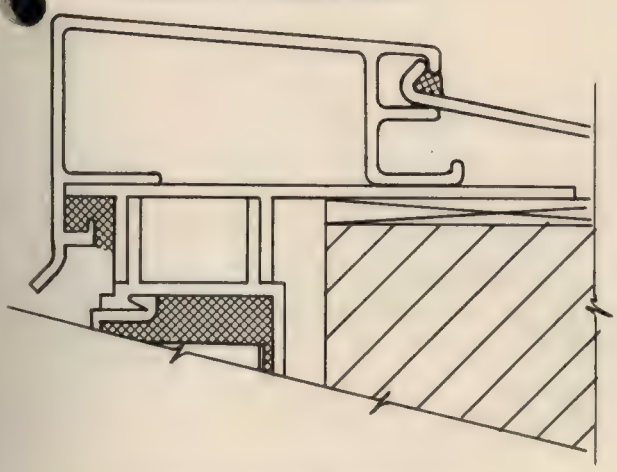
half size details

KEY ELEVATION

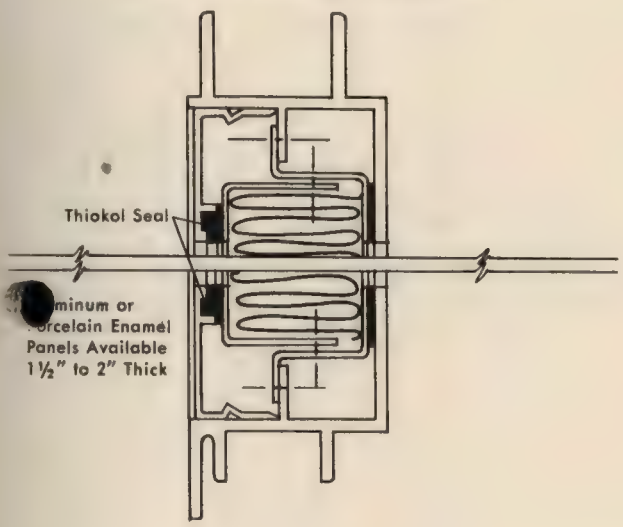


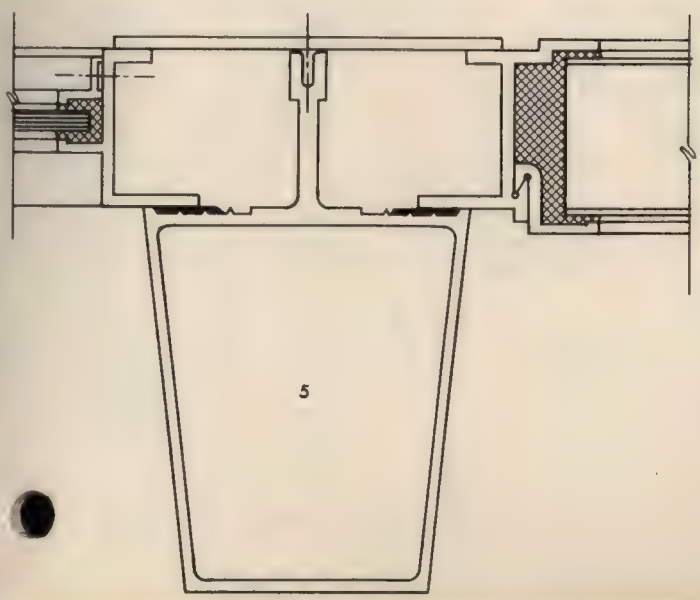


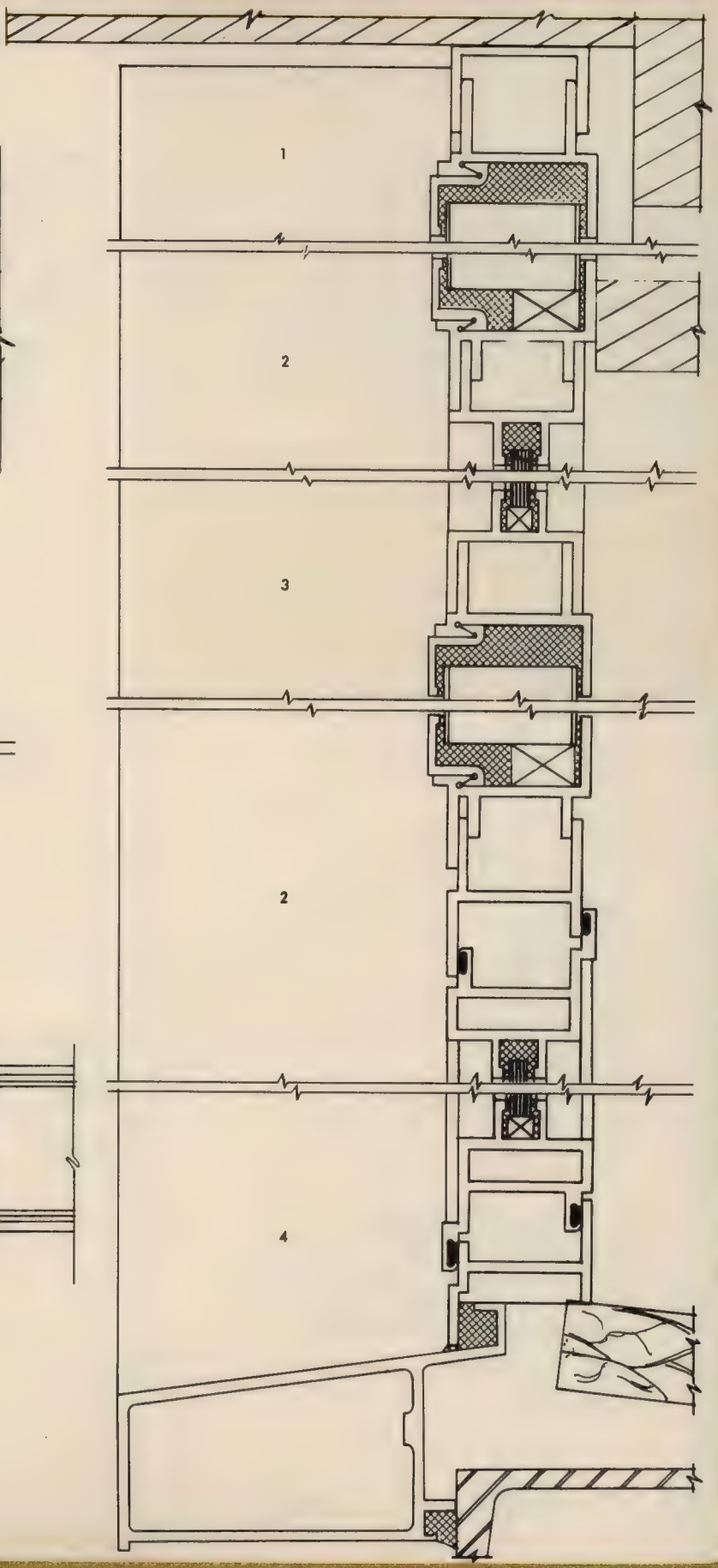
ALTERNATE COPING DETAIL



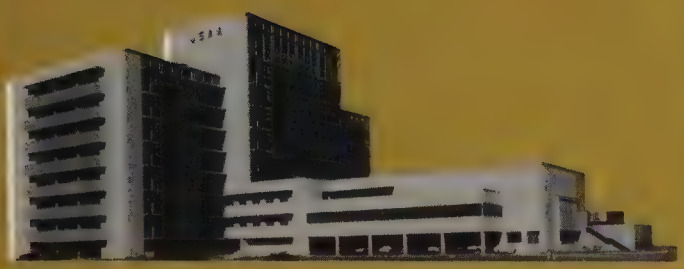
ALTERNATE PANEL FRAME DETAIL



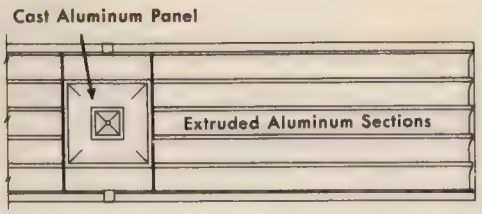




United Services Automobile Association
San Antonio, Texas
Architects: Atlee B. and Robert M. Ayres,
Phelps & Dewees & Simmons

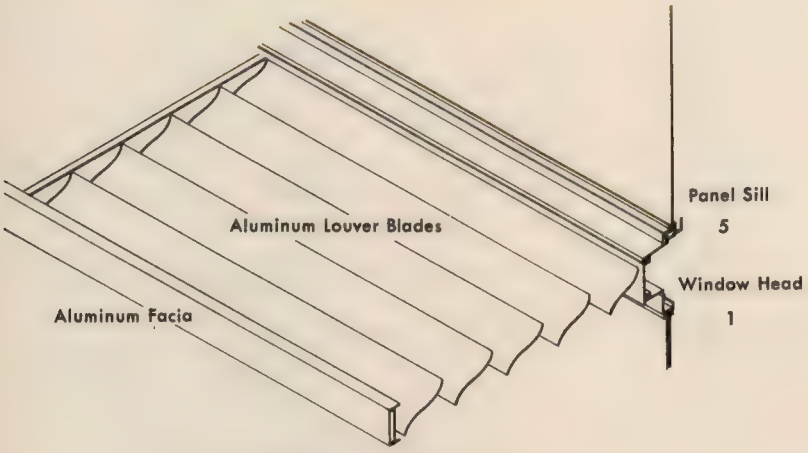


A completely custom built monumental structure, designed by the architects as a basically horizontal system. Windows are special twin projected units with tubular rails for double glazing. Aluminum balconies, louvers and special heavy extruded horizontal and vertical fins are prominent in the design. All with alumilite finish.



FRONT ELEVATION OF BALCONY RAILING
(no scale)

END ELEVATION OF BALCONY RAILING



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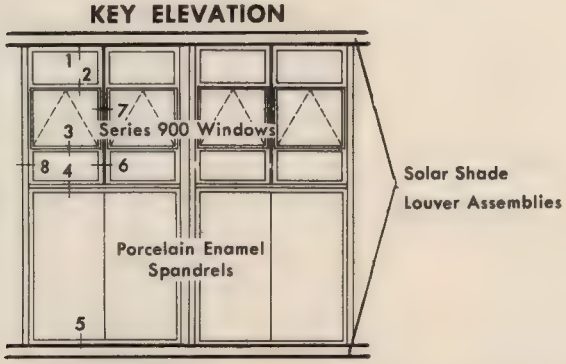
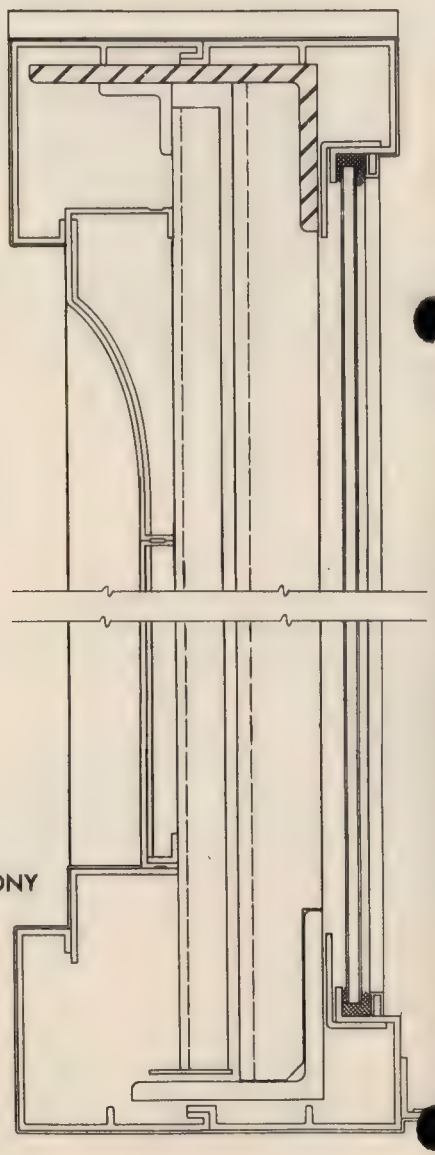
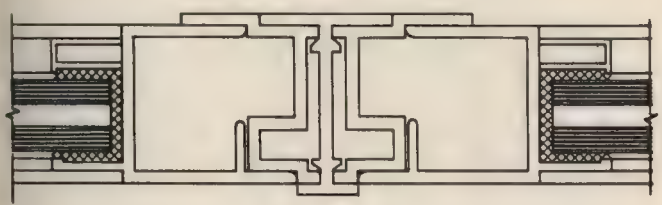


VERTICAL SECTION OF BALCONY



half size details

6



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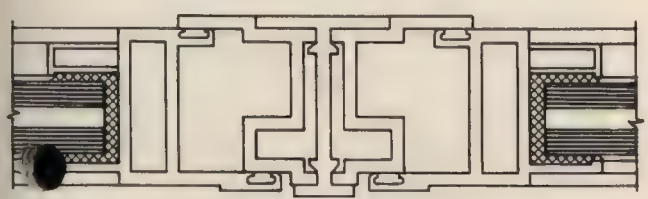
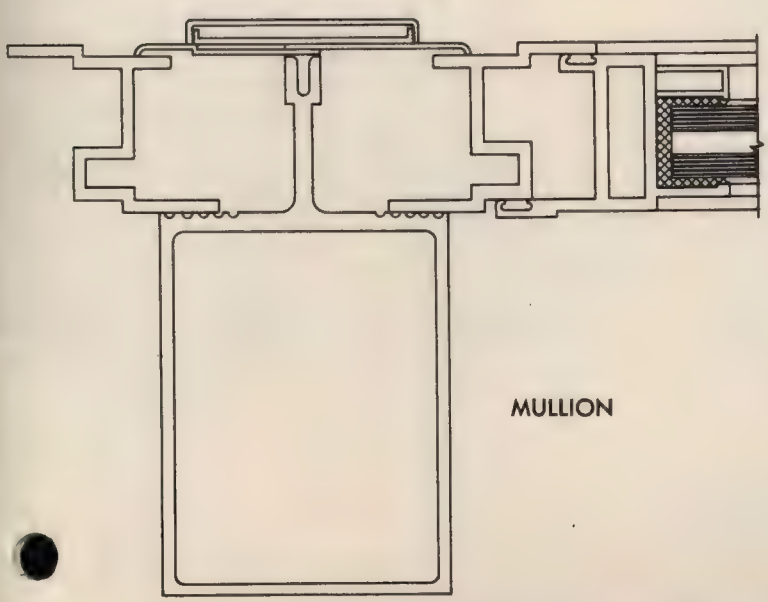
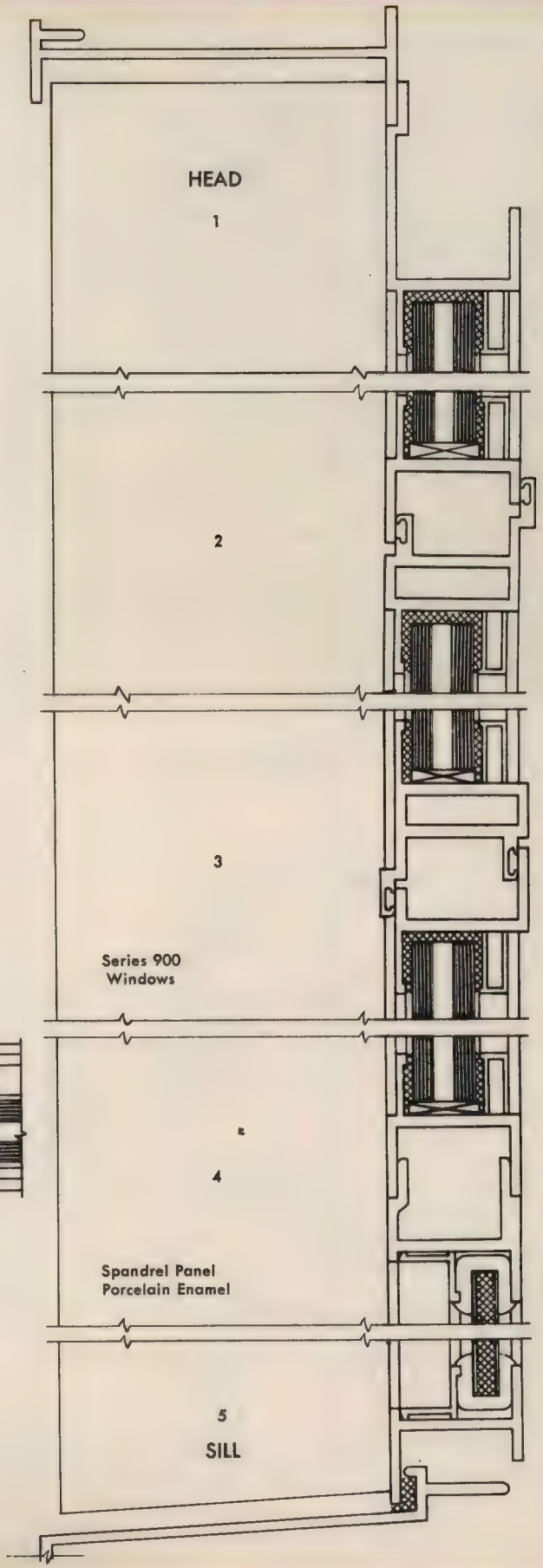


8

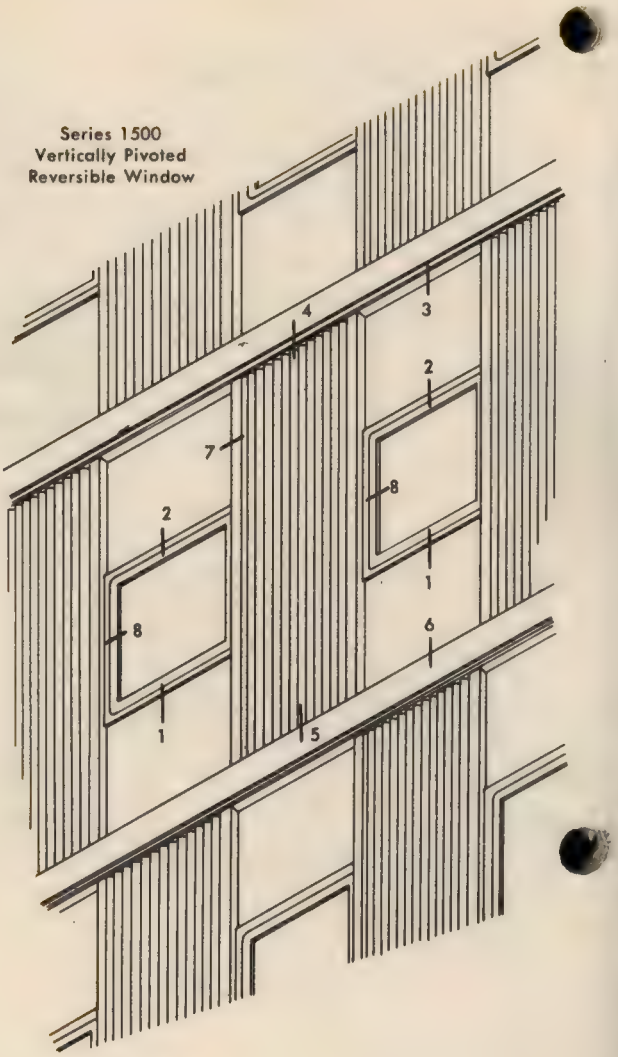


MULLION

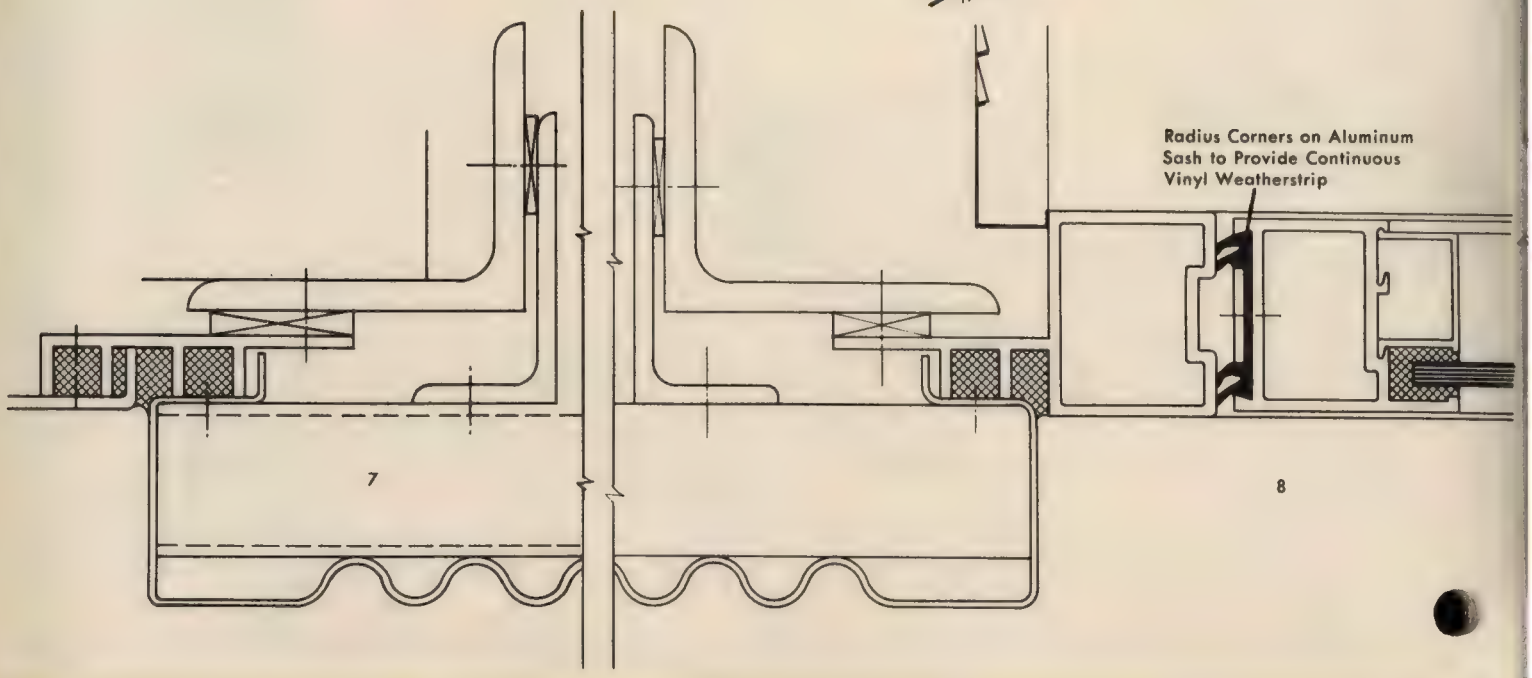


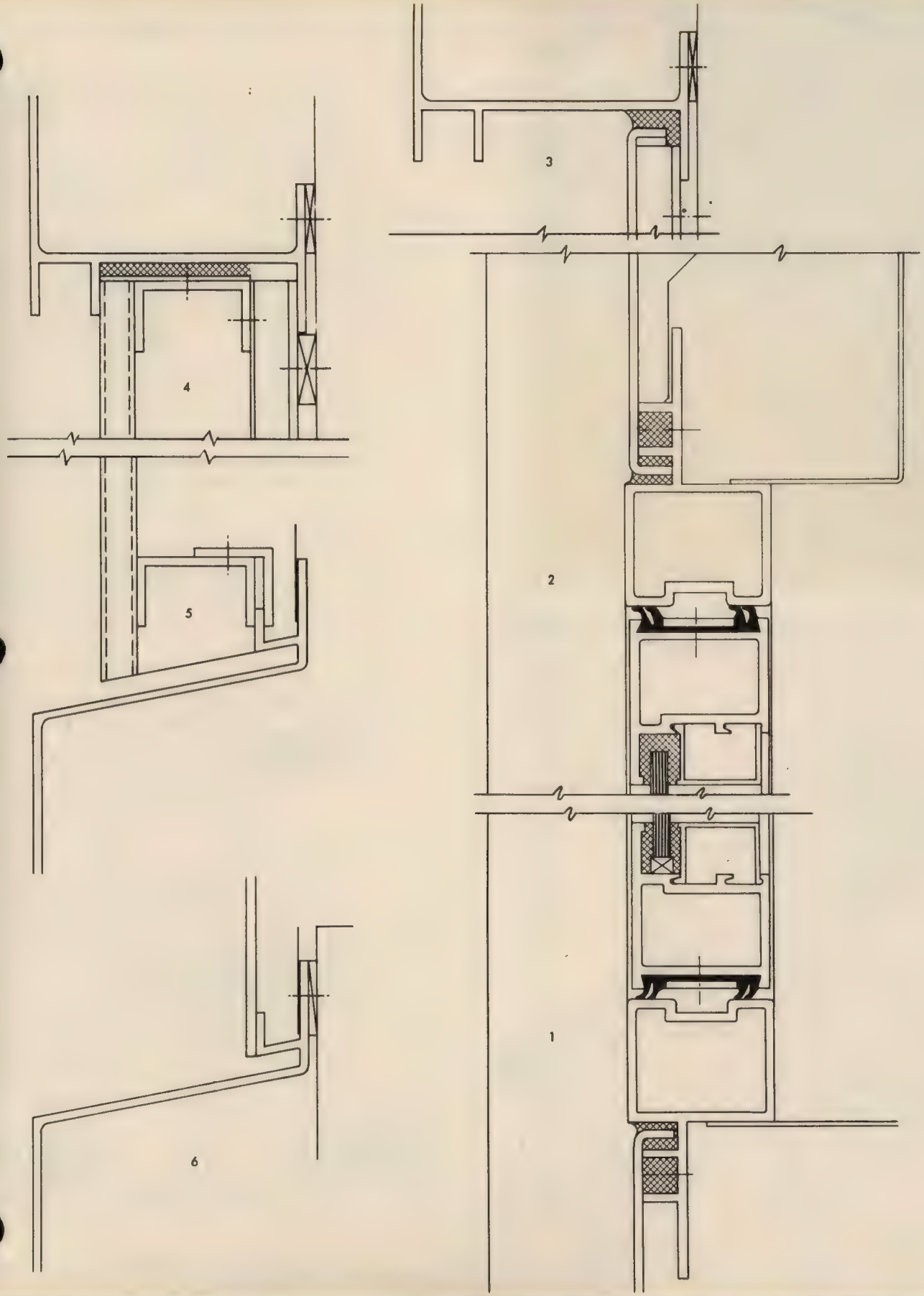
Medical Professional Building
Houston, Texas
Architects: Wirtz, Calhoun, Tungate & Jackson

A custom built reversible window job—pier panels fluted gold alumilite, panels above and below windows blue alumilite, balance of job plain alumilite with varying colors for "porcelain on aluminum" panels in garage area. Note integral connecting fin and weather bar on frame of reversible windows. Large vertical mullions in garage area are special extruded shapes, plain alumilite.



half size details

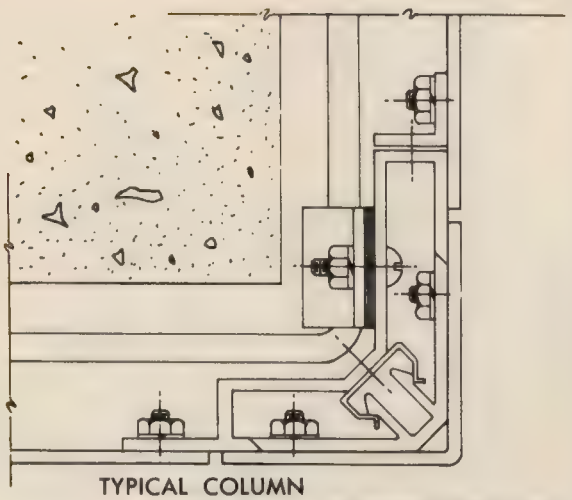



3
4
2
5
1
6

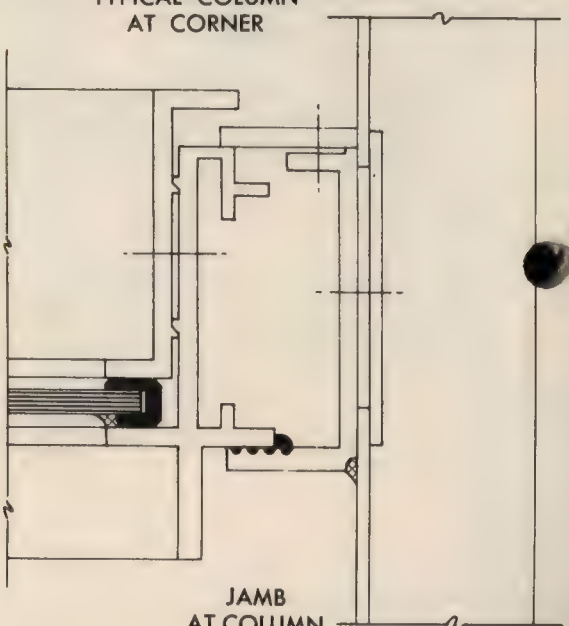
Warren Petroleum Corp., General Office Building
Tulsa, Oklahoma
Architects: Skidmore, Owings & Merrill

System designed completely by architect, his ideas duplicated exactly, without variation. The exterior line of the building features extruded aluminum facia over spandrel beams with heavy vertical aluminum I Beams. Windows are set back 5′ from facia and are heavy fixed units of special design. On each floor, two windows are vented—in-swinging casement, to allow egress for window cleaners. Top floor is screened by dark gray alumilited extrusions, running behind vertical aluminum I Beams. The balance of aluminum work is plain alumilite finish.

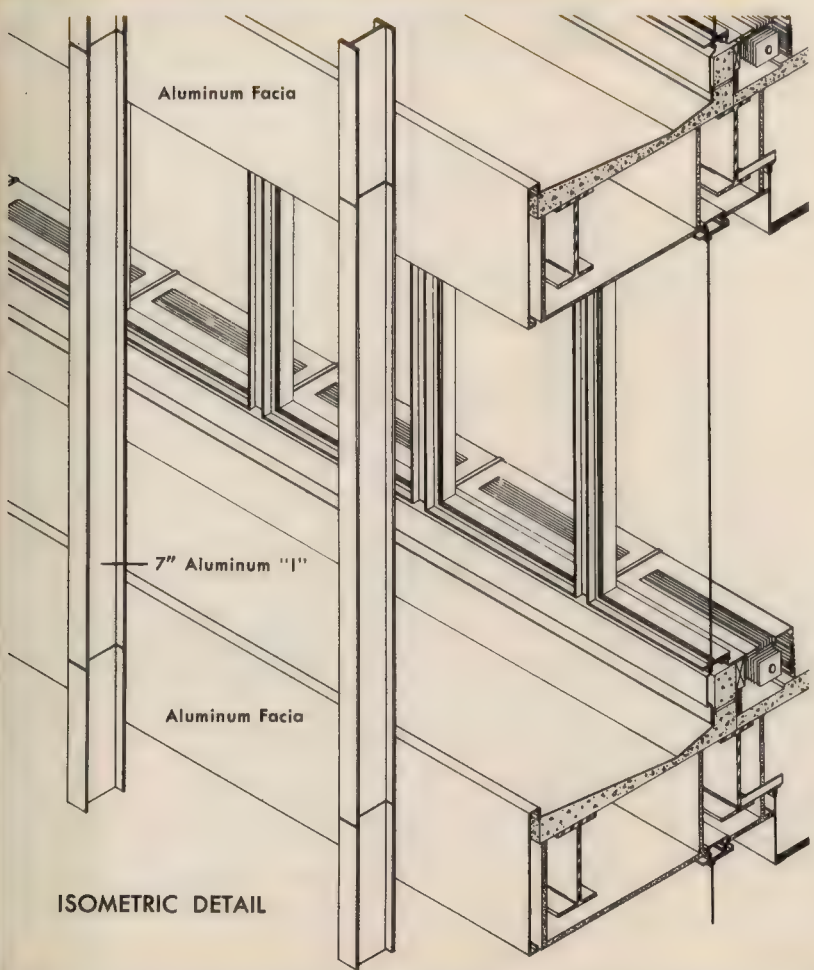
half size details



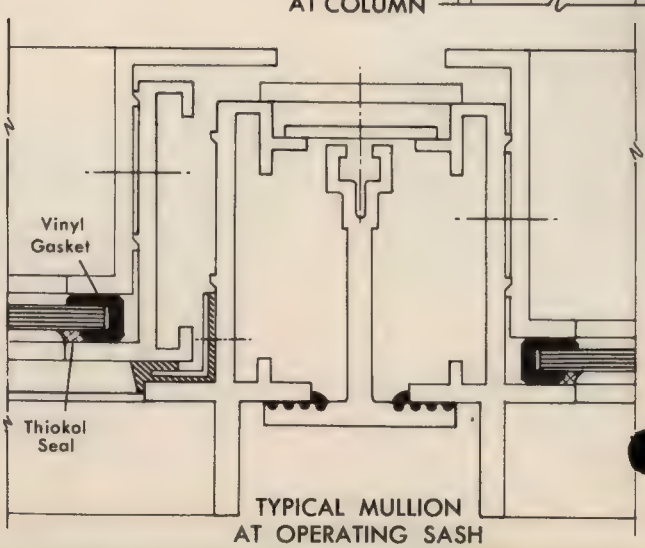
TYPICAL COLUMN
AT CORNER



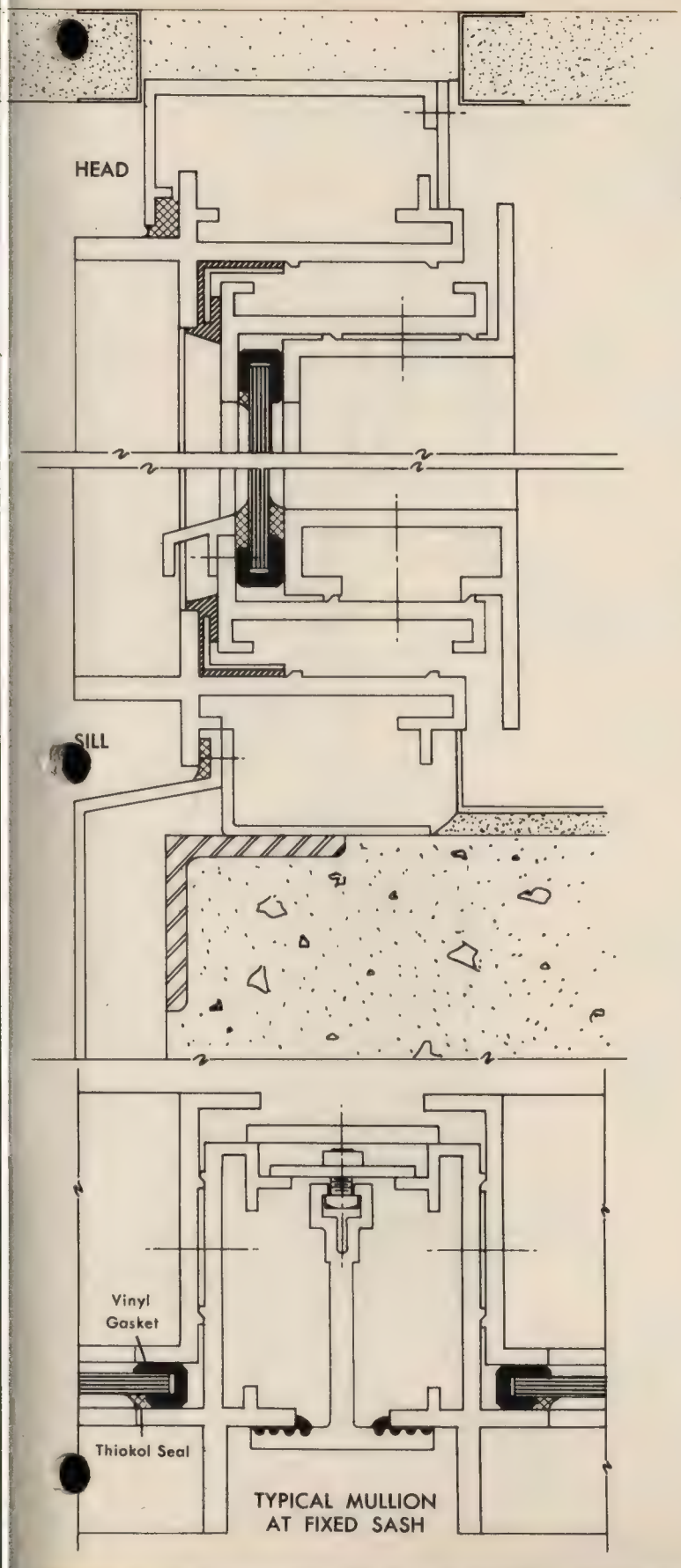
JAMB
AT COLUMN



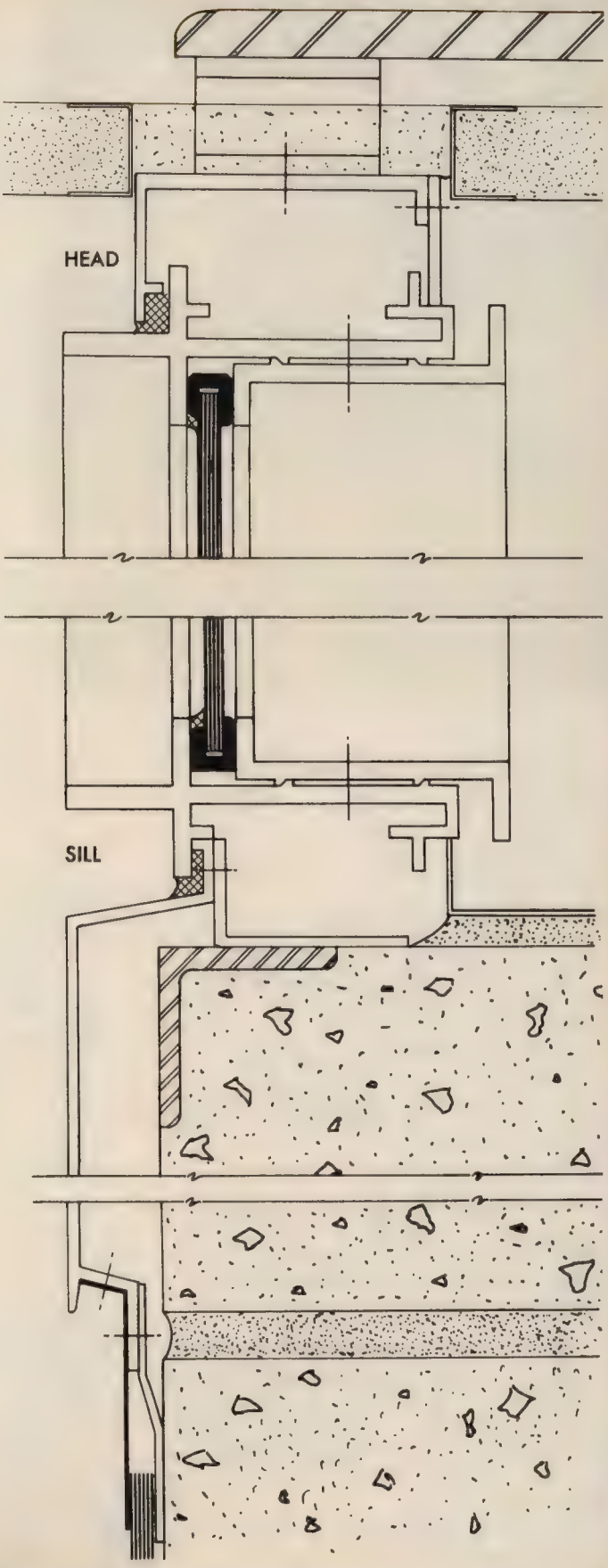
ISOMETRIC DETAIL



TYPICAL MULLION
AT OPERATING SASH



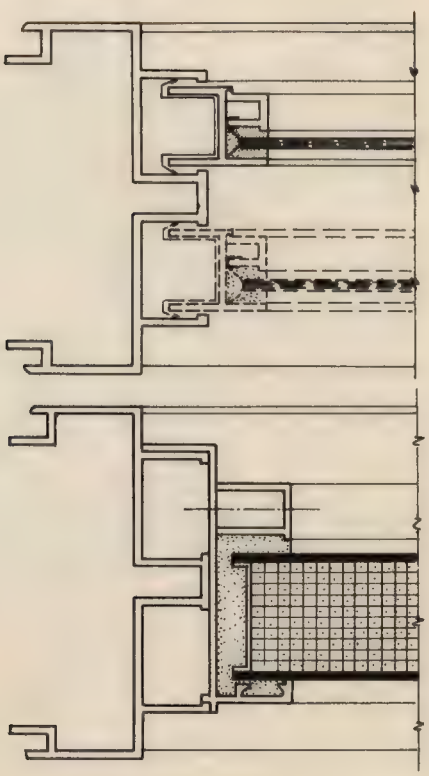
TYPICAL MULLION AT FIXED SASH



Thomas Jefferson School, Dallas, Texas
Goodwin & Cavitt

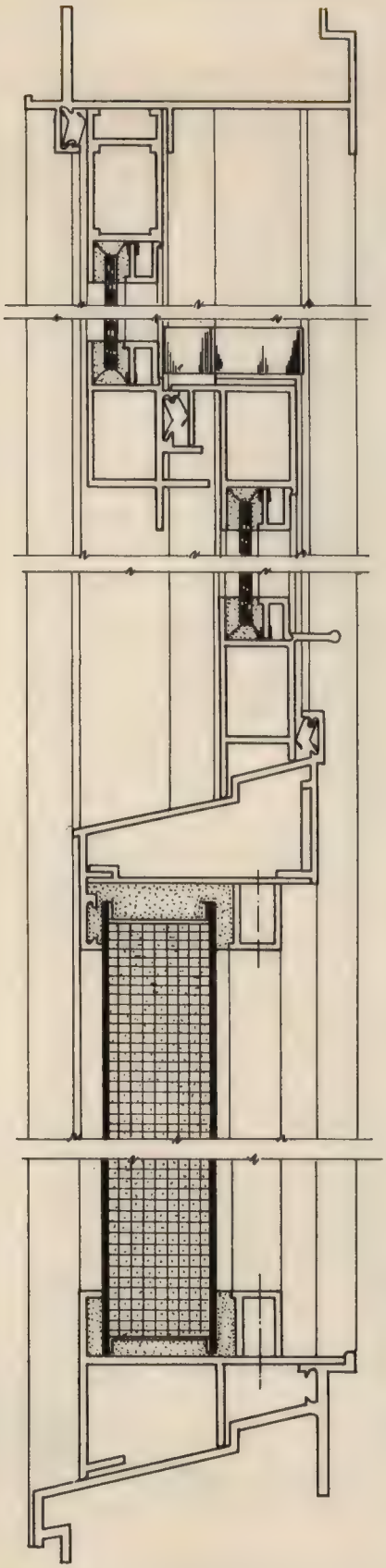
An effective use of a double hung 490 series unit with a built-in porcelain enamel insulated panel, beneath the lower sash. Vertical mullions (not shown) are of porcelain enamel to match color of panel. A very economical treatment of floor to ceiling construction in a school where the architect required insulation in his panel, and color to develop his over-all design.

half size details



JAMB AT WINDOW

JAMB AT PANEL

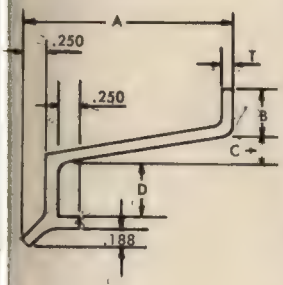


HEAD

SILL

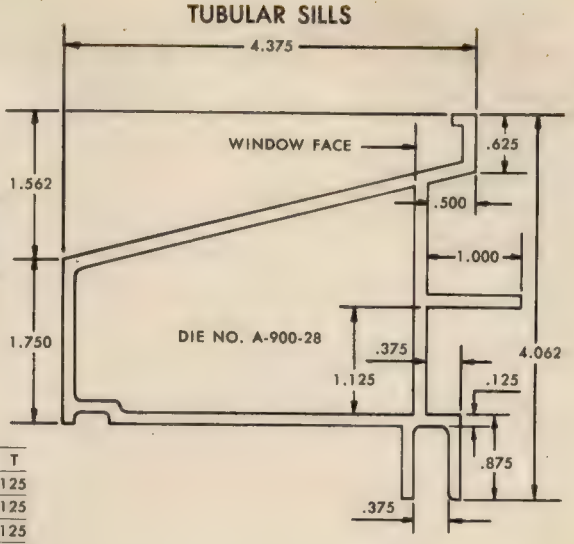
half size details

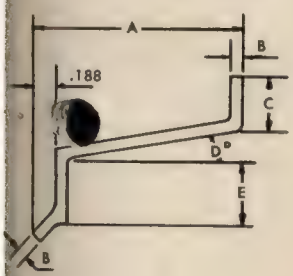
SUB SILLS

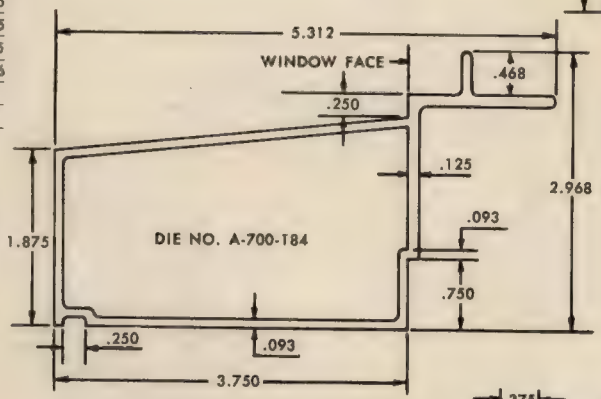


DIE No.	A	B	C	D	T
CPY-78	2.250	.500	.281	.562	.125
CPY-39	3.500	.500	.188	.562	.125
CPY-38	4.000	.500	.219	.562	.125
CPY-37	5.000	.500	.281	.562	.125
CPY-75	5.500	.500	.313	.562	.125
CPY-165	6.000	.500	.344	.562	.125
CPY-79	6.562	.500	.375	.562	.156

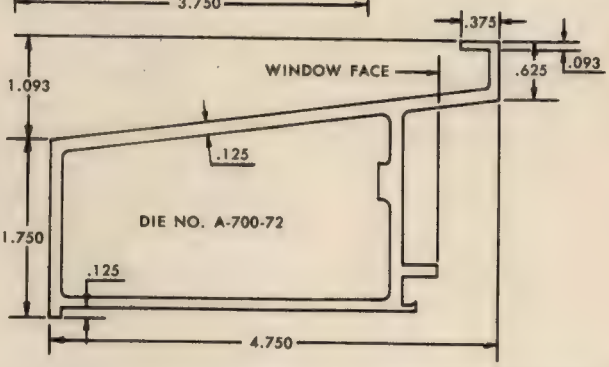
TUBULAR SILLS

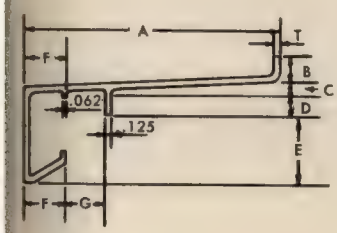


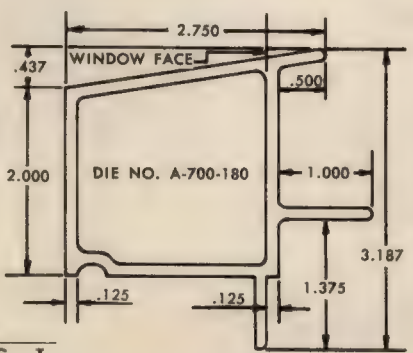




DIE No.	A	B	C	D	E
CPY-35	4.750	.125	.500	3°-46'	.688
CPY-36	4.750	.094	.469	3°- 0'	.594

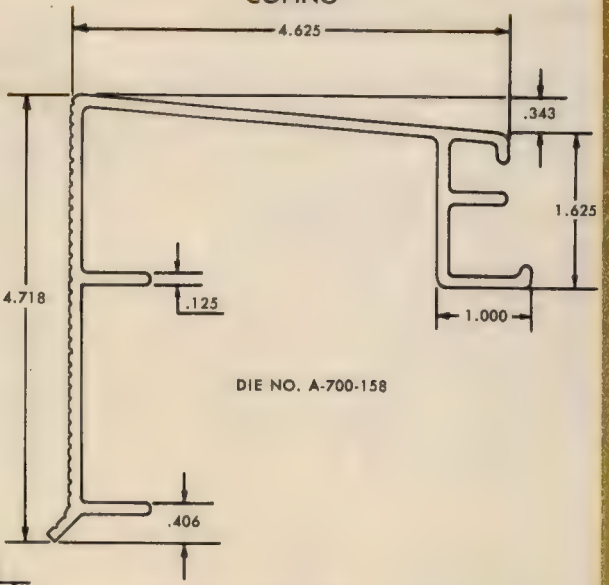


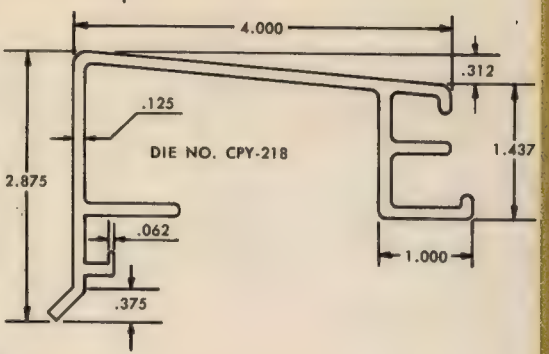


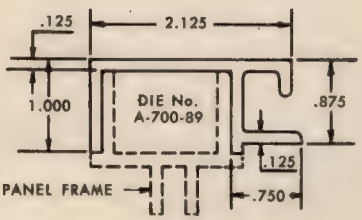


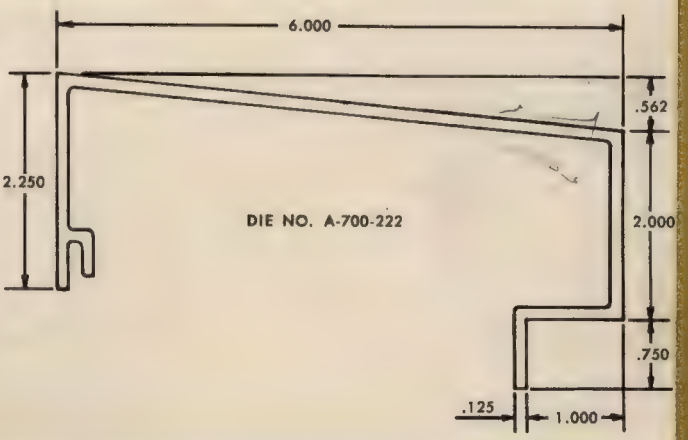
DIE No.	A	B	C	D	E	F	G	T
CPY-73	5.500	.500	.312	.812	1.125	.750	.875	.125

COPING

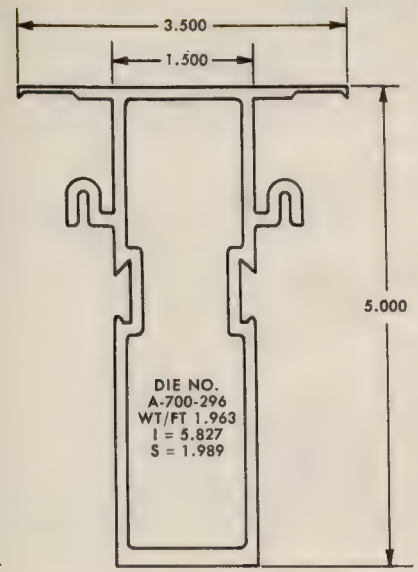


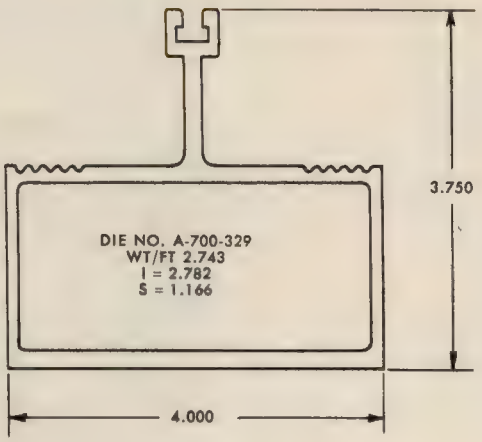


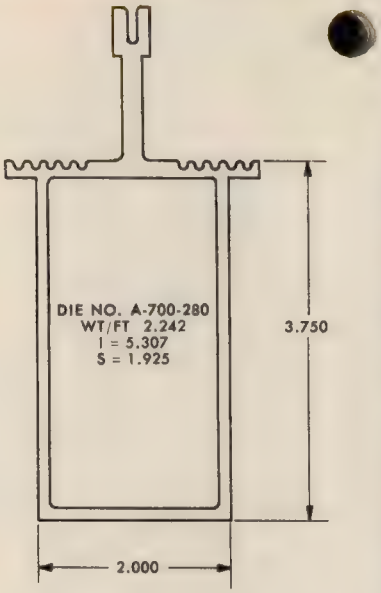


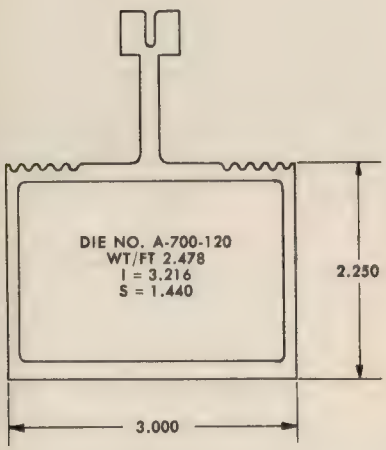


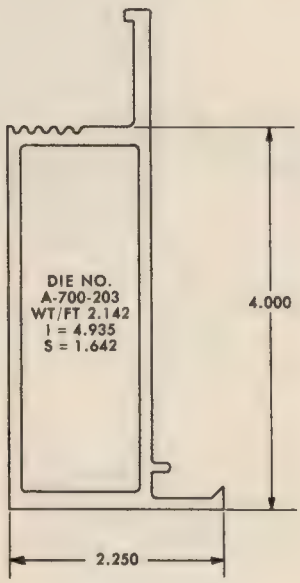
half size details



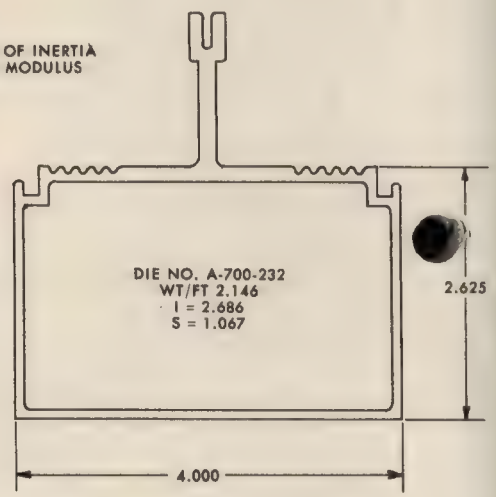


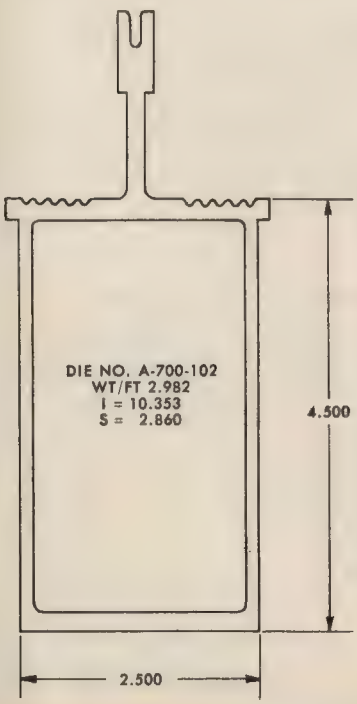


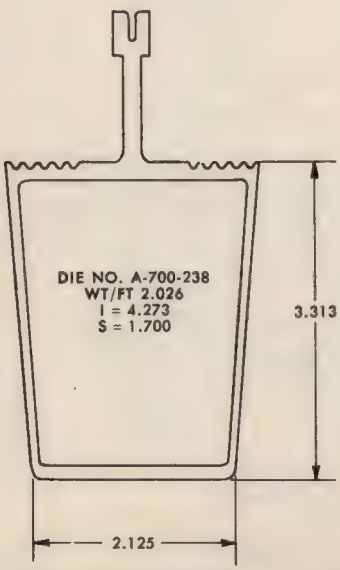


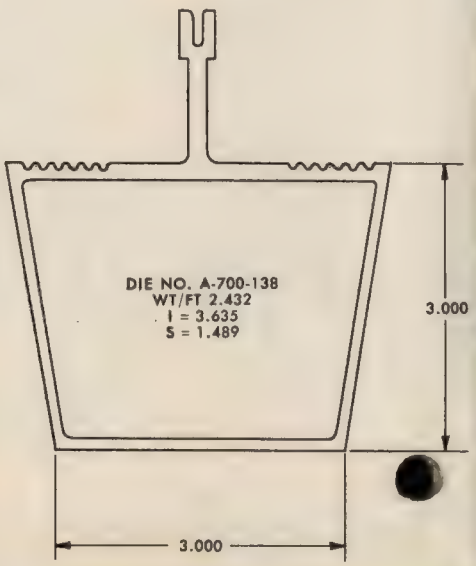


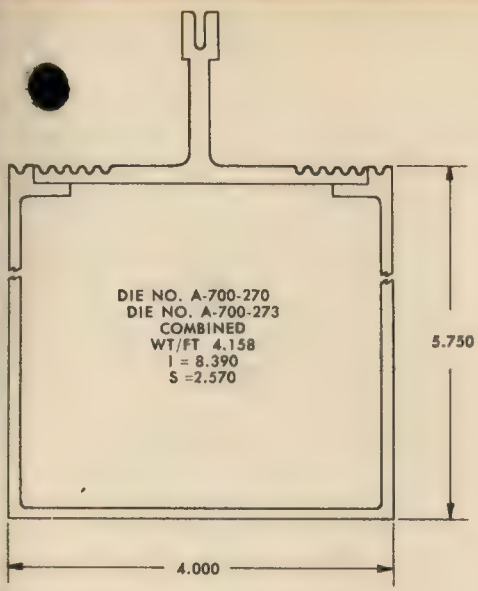
I = MOMENT OF INERTIA
S = SECTION MODULUS

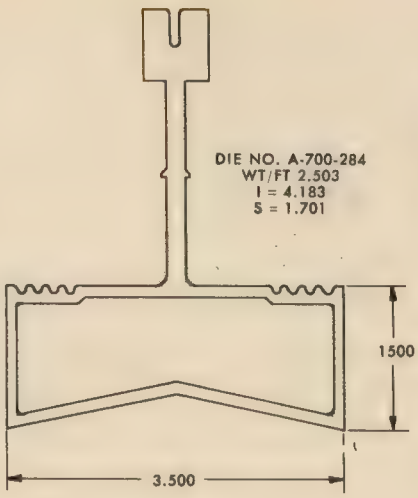









DIE NO. A-700-270
DIE NO. A-700-273
COMBINED
WT/FT 4.158
I = 8.390
S =2.570
5.750
4.000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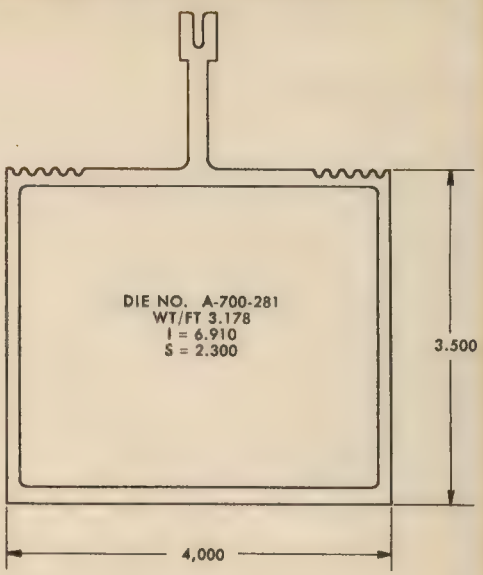
1500
3.500


DIE NO. A-700-281
WT/FT 3.178
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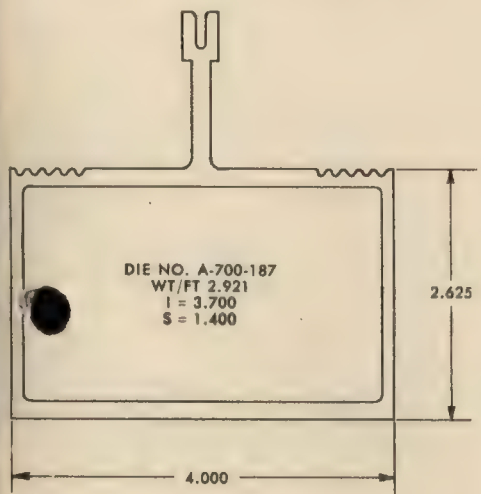
S = 2.300
3.500
4,000


DIE NO. A-700-187
WT/FT 2.921
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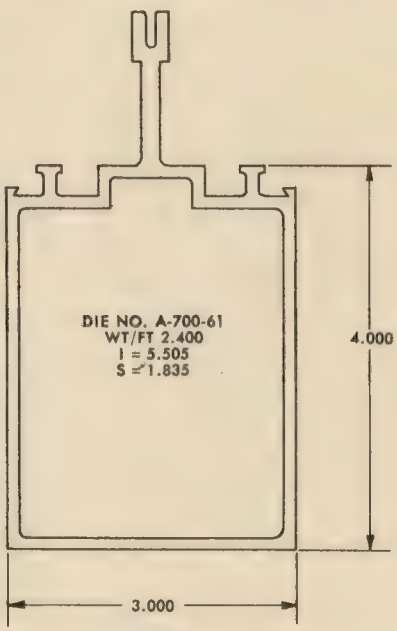
2.625
4.000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I = 5.505
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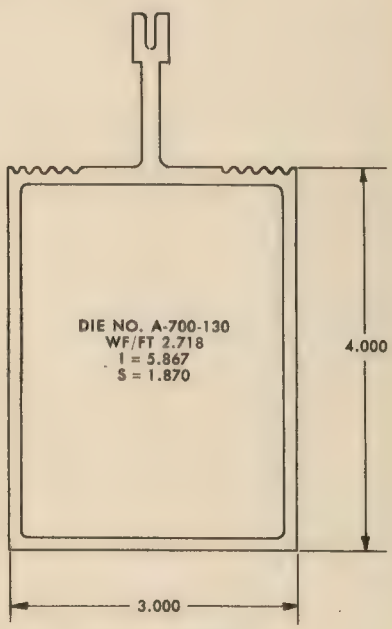
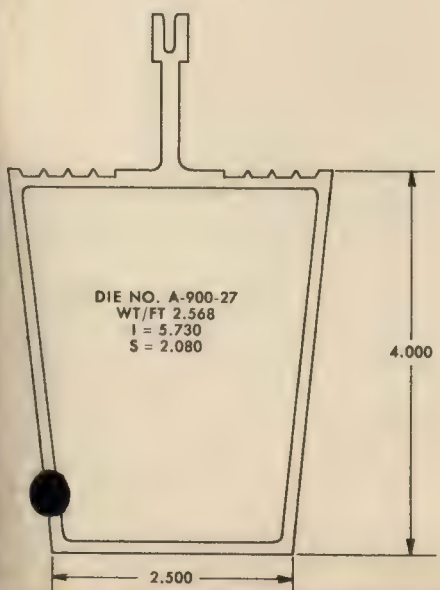
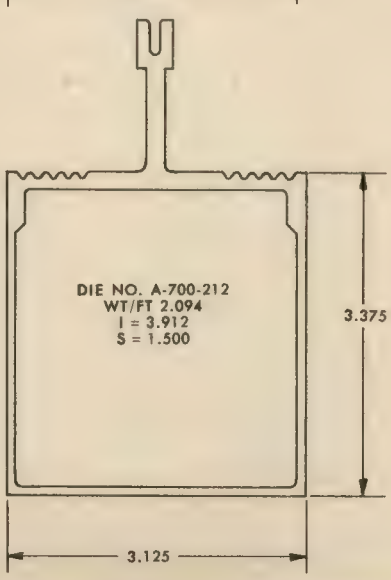
3.000


DIE NO. A-700-130
WF/FT 2.718
I = 5.867
S = 1.870
4.000
3.000


1"
DIE NO. A-900-27
WT/FT 2.568
I = 5.730
S = 2.080
4.000
2.500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I = 3.912
S = 1.500
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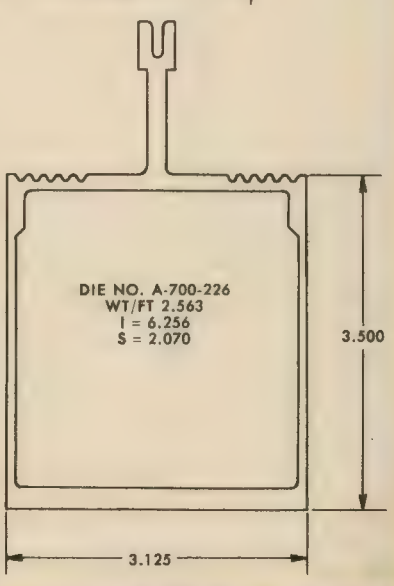
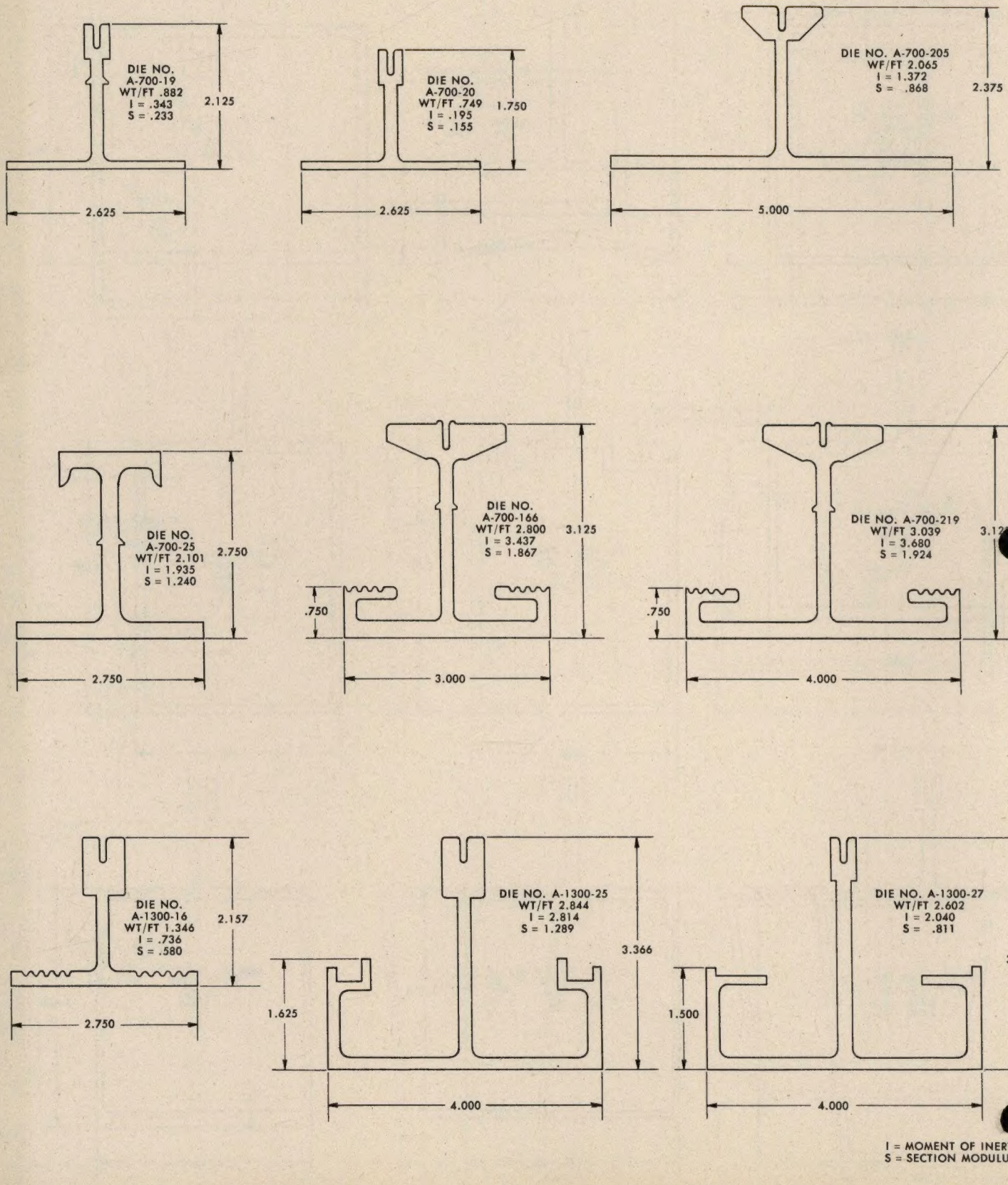
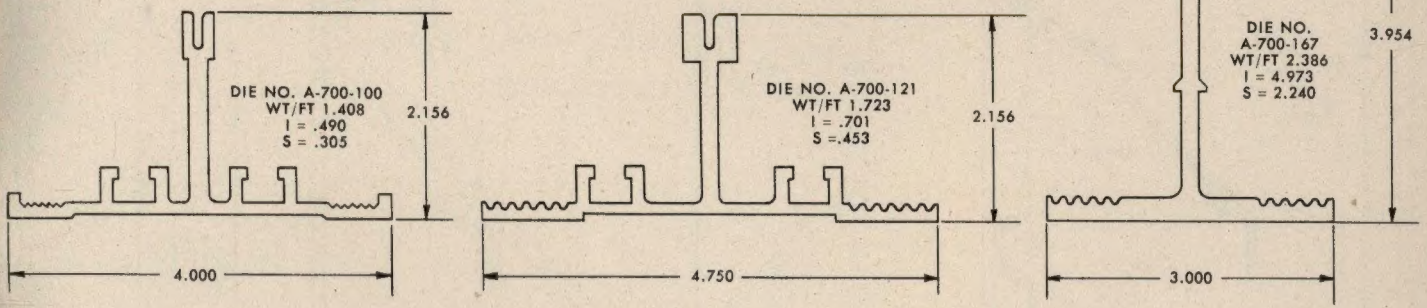
3.125


DIE NO. A-700-226
WT/FT 2.563
I = 6.256
S = 2.070
3.500
3.125

half size details



I = MOMENT OF INERTIA
S = SECTION MODULUS


DIE NO. A-700-100
WT/FT 1.408
I = .490
S = .305
2.156
4.000
DIE NO. A-700-121
WT/FT 1.723
I = .701
S =.453
2.156
4.750
DIE NO.
A-700-167
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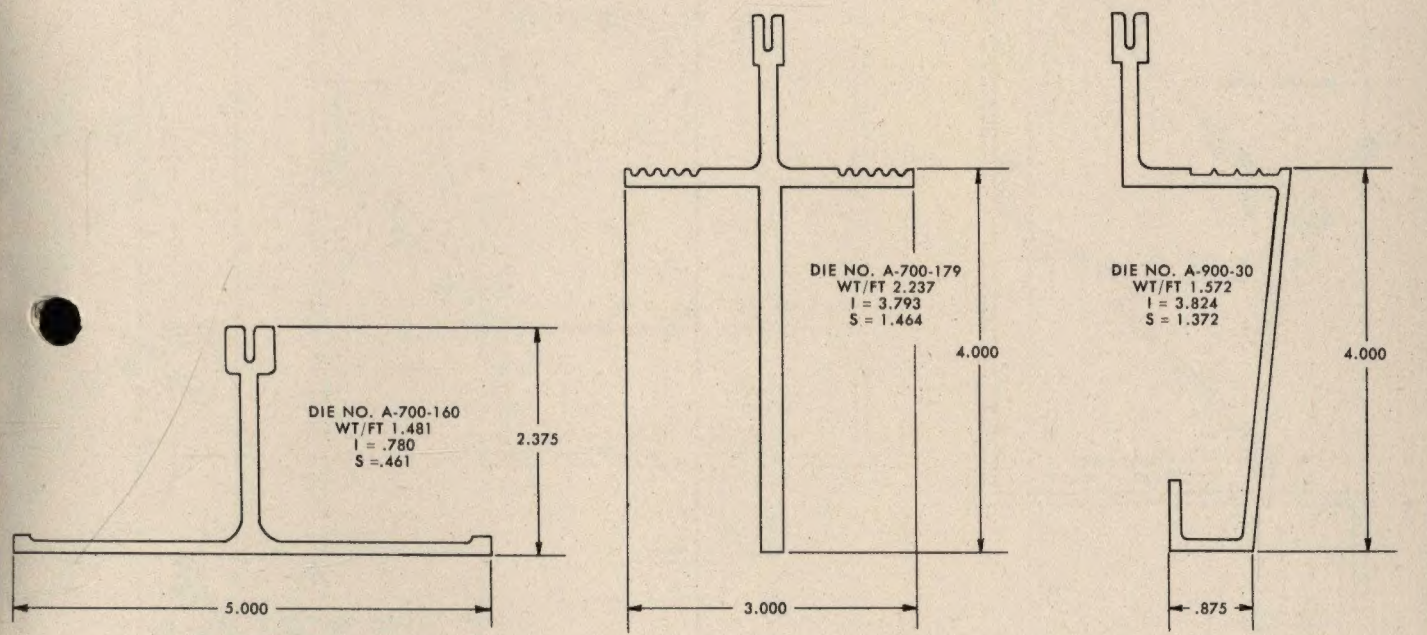
I = 4.973
S = 2.240
3.954
3.000


DIE NO. A-700-160
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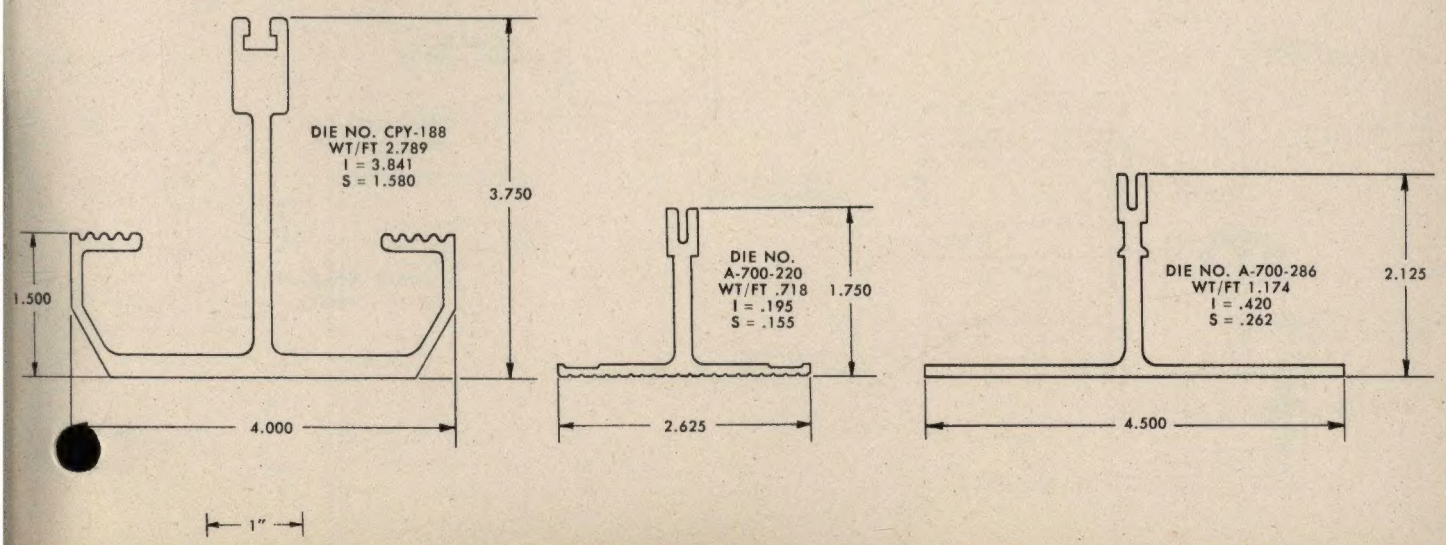
S =.461
2.375
5.000
DIE NO. A-700-179
WT/FT 2.237
I = 3.793
S = 1.464
4.000
3.000
DIE NO. A-900-30
WT/FT 1.572
I = 3.824
S = 1.372
4.000
.875


DIE NO. CPY-188
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3.750
1.500
4.000
DIE NO.
A-700-220
WT/FT .718
I = .195
S = .155
1.750
2.625
DIE NO. A-700-286
WT/FT 1.174
I = .420
S = .262
2.125
4.500
1"

Cupples

typical curtain wall installations

Cadet Quarters Complex
United States Air Force Academy
Colorado Springs, Colorado
Architect: Skidmore, Owings & Merrill

Office Building, 400 Park Avenue
New York City, N. Y.
Architect: Emery Roth & Sons

Colorado Insurance Group Building
Boulder, Colorado
Architect: James M. Hunter

United Services Automobile Association Building
San Antonio, Texas
Architect: Atlee B. & Robert M. Ayers —Phelps & Dewees & Simmons

Redding Miller Office Building
Denver, Colorado
Architect: T. J. Moore, Jr.

Clinton Place Junior High School
Newark, New Jersey
Architect: Kelly & Gruzen

First Security Bank
Salt Lake City, Utah
Architect: W. G. Knoebel
Associate Architect: Slack W. Winburn

Harrison S. Martland Medical Center (Newark City Hospital)
Newark, New Jersey
Ziegler, Childs & Paulsen, Architect

Uris Brothers Office Building
485 Lexington Avenue
New York City, N. Y.
Architect: Emery Roth & Sons

Chaminade Dormitory & Faculty Building
Clayton, Missouri
Architect: Murphy & Mackey

Office & Laboratory Buildings
General Electric Company
Roanoke, Virginia
Architect: J. E. Sirrine Co.

Hayden Science Building
Brandeis University
Waltham, Massachusetts
Architect: Shepley, Bulfinch, Richardson & Abbott

West Penn Power Office Building
Greensburg, Pa.
Architect: Hoffman & Crumpton, Associates

The Park Terrace
Brookline, Massachusetts
Architect: Samuel Glaser & Associates

Onondaga County Office Building
Syracuse, New York
Architect: King & King

YM-YWCA Building
Newark, New Jersey
Architect: Emil A. Schmidlin

Continental National Bank & Office Building
Fort Worth, Texas
Architect: Preston M. Geren

The Medical Towers
Houston, Texas
Architect: Goleman & Rolfe

Meadows Building
Dallas, Texas
Architect: J. N. MacCammon

Fairmont High School
Fairmont, Minnesota
Architect: Hills, Gilbertson & Hayes— McClure & Kerr

Kansas State Office Building
Topeka, Kansas
Architect: John A. Brown
Structural Engineer: Finney and Turnipseed

Webb & Knapp Office Building
112 W. 34th Street
New York City, N. Y.
Architect: Brugnoni and Boehler

Henry C. Beck Building
Shreveport, Louisiana
Architect: Neild-Somdal-Associates

Monsanto Chemical Company Office Buildings
St. Louis County, Missouri
Architect: Vincent Kling

McDonnell Aircraft Corporation
St. Louis County, Missouri
Architect: Harris Armstrong

Como Park Junior High School
St. Paul, Minnesota
Architect: Haarstick-Lundgren & Associates

Fulton County Federal Savings & Loan Association
Atlanta, Georgia
Architect: Abreu and Robeson, Inc.

1000-Bed Addition
U. S. Naval Hospital
San Diego, California
Architect: Welton Becket & Associates

St. Luke's Memorial Hospital
Utica, New York
Architect: Egbert Bagg Associates

Medical Building
East St. Louis, Illinois
Architect: Shapiro & Tisdale

Beneficial Life Insurance Building
Salt Lake Ciy, Utah
Architect: Ashton, Evans & Brazier

CUPPLES PRODUCTS CORPORATION

2650 South Hanley Road • St. Louis 17, Missouri